

Resilient and people-centred health systems: Progress, challenges and future directions in Asia

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Chapter 7. Japan

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7.1 Introduction

Japan, the world's third-largest economy, with a correspondingly high standard of living, level of development, safety and stability, has had great success in improving population health outcomes, such as boasting of the highest life expectancy in the world. However, the country faces many challenges, including an ageing population with a low fertility rate, a shrinking economy, and an increasing burden from NCDs and degenerative diseases, such as dementia, which all impose a considerable stress on the current health and long-term care systems in Japan.

7.1.1 Economic context

Japan is an archipelago set between the Sea of Japan to the west and the Pacific Ocean to the east, consisting of more than 6000 islands. The majority of its population inhabit the four major islands, which are divided into 47 prefectures. These are further divided into approximately 1700 cities, towns and villages. Japan's total population stands at 126 million in 2018, though it has been constantly declining since 2011. The proportion of the population aged 65 years and above reached 27.3% in 2016, which together with a low fertility rate and strict immigration policy, makes Japan one of the "oldest" countries in the world.

Japan is the world's third-largest economy in terms of total GDP. However, although Japan's GDP increased rapidly in the period immediately after the Second World War, the economic crisis of the 1990s caused several decades of stagnation and recession. The recession, along with more recent stagnation in GDP growth rate and an ageing population has meant that the Gini coefficient reached 0.33 in 2012, higher than the OECD average of 0.318. Moreover, although the unemployment rate was low at 3.4% in 2015, the number of part-time and contingent workers has been increasing in recent years. The majority of them are the elderly and post-childrearing women. The inequality in working conditions and low wages among this population pose a serious labour issue.

Table 7.1 Japan: Socioeconomic indicators, 1980–2017

Indicators	1980	1990	2000	2010	2015	2017
Population, total (in millions)	116.8	123.5	126.8	128.1	127.1	126.8
Population density (people per sq.km of land area)	318.8	338.8	348	351.3	348.8	347.8
Fertility rate, total (births per woman)	1.8	1.5	1.4	1.4	1.5	1.44 (2016)
Birth rate, crude (per 1000 people)	13.5	10.0	9.4	8.5	8.0	7.8 (2016)
Death rate, crude (per 1000 people)	6.1	6.7	7.7	9.5	10.3	10.5 (2016)
Population growth (annual %)	0.8	0.3	0.2	0	-0.1	-0.2
Population ages 65 and above (% of total)	8.9	11.9	17.0	22.5	26.0	27.0
Age dependency ratio, old (% of working-age population)	13.2	17.0	24.9	35.1	42.7	45.0
Age dependency ratio, young (% of working-age population)	34.9	26.5	21.7	20.8	21.3	21.5
GDP (current US\$, billions)	1105.4	3132.8	4887.5	5700.1	4395	4872.1
GDP per capita (current US\$)	9465.4	25 359.3	38 532	44 507.7	34 567.7	38 428.1
GDP growth (annual %)	2.8	4.9	2.8	4.2	1.4	1.7
Gross national expenditure (% of GDP)	101.0	99.2	98.6	98.5	100.4	99.0 (2016)
Tax revenue (% of GDP)	10.5	12.9	10.4	8.8	11.4	11.1 (2016)
Central Government debt, total (% of GDP)	..	52.9	100.5	162.3	197	195.5 (2016)
Industry, value added (% of GDP)	..	..	32.8	28.4	28.9	29.3 (2016)
Agriculture, forestry and fishing, value added (% of GDP)	..	..	1.5	1.1	1.1	1.2 (2016)
Services, value added (% of GDP)	..	..	65.9	70.2	69.1	68.8 (2016)
Labour force, total (in millions) ^a	56.5	63.9	67.7	66.7	66.4	66.5
Unemployment, total (% of total labour force) (modelled ILO estimate) ^a	2.0	2.1	4.7	5.1	3.3	2.8
Income inequality (Gini coefficient) ^b	0.318 (1981)	0.364	0.381 (1999)	0.379 (2011)	0.376 (2014)	
Current health expenditure (% of GDP)	..	..	7.2	9.2	10.9	..

Key: GDP: gross domestic product; ILO: International Labour Organization

Note: The Gini coefficient is a measure of income inequality; higher figures indicate greater inequality among the population (the Survey of the Redistribution of Income is conducted once in three years).

Sources: World Bank, 2018a; ^aStatistics Bureau, Ministry of Internal Affairs and Communications, 2017; ^bMinistry of Health, Labour and Welfare (MHLW), 2017a

7.1.2 Political context

The Liberal Democratic Party of Japan (LDP) has been the major party since 1955 (except in 1993 and between 2009 and 2012), so most of Japan's health-care systems have been created and managed under the LDP administration. Since the Second World War, political conflict between the major parties resulted in the expansion of health service coverage to more vulnerable groups, as the LDP attempted to weaken the socialist and communist party. Nobusuke Kishi of the LDP, then prime minister, strongly believed that attaining an equitable health-care and welfare system could be the driving force in making his administration sustainable and declared that Japan had officially achieved universal health insurance coverage in 1961. Since then, together with the pressure from the socialist party, the ruling LDP expanded the breadth and depth of universal insurance coverage (which in turn caused a constant increase in health-care expenditure).

In the early 1980s, at a time when global leaders were promoting austere fiscal policy, also known as “small government”, the then prime minister, Yasuhiro Nakasone from the LDP also started an austere fiscal policy on health care in Japan. This was the turning point at which the government began to contain the health-care budget primarily through introducing a fee-control schedule (details of the fee-control schedule are explained later).

In 2001, Junichiro Koizumi of the LDP was elected as prime minister. He had a strong preference for “small government” and minimum government subsidy for social welfare. Although there was strong opposition from the Japan Medical Association (JMA) (mainly directed at the strong, austere fiscal policy on health care and the increase in both OOP expenditures and insurance premiums), Koizumi initiated the largest-ever cut in health-care budget in Japan's history, which inevitably put a strain on the health-care setting and created a “health-care crisis”. Since then, how to balance cost and quality of health care remains a central debate in Japan.

Historically, both the Ministries of Health, Labour and Welfare, and the Ministry of Finance had strong influence over the health policy making process. Since 2016, the current Prime Minister, Shinzo Abe changed this process drastically as he believes that health care is the Japan's main

industry. Consequently, along with the Ministry of Economy, Trade and Industry, the cabinet office now leads many of health care policies in Japan.

7.1.3 Natural and human-induced disasters

Japan's geographical proximity to the Pacific Rim makes the country particularly prone to seismic activity, earthquakes, tsunamis and typhoons originating from the Pacific Ocean. Thus, disaster has been a major threat to population health, both in terms of acute response and long-term recovery phases. Of particular note, the devastating magnitude 9.0 Great East Japan Earthquake in 2011 killed more than 16 000 people and, coupled with the subsequent tsunami and Fukushima Daiichi nuclear power plant accident, this triple disaster caused massive destruction of local health-care and long-term care facilities. However, despite the damage to infrastructure, people in many affected areas have had continued access to quality health care under the universal health insurance system, in part due to introduction of temporary exemptions for OOP payments (Tanihara, Tomio and Kobayashi, 2013). While there is growing evidence that major disasters contribute to the development of CVDs, several studies from the area most seriously affected by the triple disaster showed only slight or no obvious increase in the risk of CVDs post-disaster (Toda et al., 2017). These experiences suggest that a strong universal health-care system supports robustness and resilience during public health emergencies in Japan.

As to the Fukushima Daiichi Nuclear Power Plant Accident, health threats have arisen in radiation-contaminated areas, and the cumulative dose from external and internal radiation exposure was a major public concern (Brumfiel and Cyranoski, 2011). Contrary to this belief, as a result of the natural weathering process and the success of strict control of food contamination, dosage levels attributed to the incident have been low enough such that the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) and WHO concluded that the predicted risk of lifetime cancer is very low in the general population, except the most exposed infants and children.

7.2 Health status and risk factors

7.2.1 Health status

Life expectancy and healthy life expectancy in Japan were 79.9 years for men and 86.3 years for women, and 71.5 years for men and 76.3 years for women, respectively, in 2015; both statistics represented the highest in the world (Nomura et al., 2017). The top causes of death in 2005 and 2015 are shown in Table 7.2. Like many other high-income countries, according to the GBD study, NCDs are the leading cause of mortality and morbidity in Japan, while the burden of communicable diseases has decreased substantially over the past five decades. In 2015, the top three leading causes of death were cerebrovascular disease, ischaemic heart disease and lower respiratory tract infection. Though age-standardized rates of these diseases have shown a substantial decrease since 1990, the pace of decline in mortality has levelled off since 2005.

Table 7.2 Japan: Causes of death, both sexes, 2005 and 2015

Leading causes in 2005	Leading causes in 2015	Change in age-standardized death rate (%), 2005–2015
1 Cerebrovascular disease	1 Cerebrovascular disease	–19.3
2 Ischaemic heart disease	2 Ischaemic heart disease	–11.6
3 Lower respiratory infection	3 Lower respiratory infection	–6.5
4 Alzheimer's disease	4 Alzheimer's disease	3.7
5 Lung cancer	5 Lung cancer	–8.7
6 Stomach cancer	6 Stomach cancer	–5.9
7 Colorectal cancer	7 Colorectal cancer	–6.4
8 Liver cancer	8 Chronic kidney disease	–11.2
9 Self-harm	9 Liver cancer	4.1
10 Chronic kidney disease	10 COPD	–16.0
11 COPD	11 Pancreatic cancer	6.5
12 Pancreatic cancer	12 Self-harm	–2.3
13 Gallbladder cancer	13 Gallbladder cancer	5.1
14 Aortic aneurysm	14 Aortic aneurysm	2.1
15 Oesophageal cancer	15 Other cardiovascular disease	–8.7
16 Breast cancer	16 Interstitial lung disease	0.7
17 Other cardiovascular disease	17 Breast cancer	0.0
18 Cirrhosis hepatitis C	18 Oesophageal cancer	–14.4
19 Road injuries	19 Lymphoma	–6.6
20 Interstitial lung disease	20 Other neoplasms	–18.8

Key: COPD: chronic obstructive pulmonary disease; CVD: cardiovascular disease

Note: The ranking is based on the number of deaths from each cause

Source: Nomura et al., 2017

Because of prolonged life expectancy, the Japanese population now suffers from more chronic and age-related morbidity. Tables 7.3 and Fig. 7.1 show the causes of DALYs – a summary indicator of population health that combines mortality and morbidity – in 2015 in Japan. DALYs express equivalent years of healthy life lost due to states of poor health or disability, which explains the current status of population health in general rather than just in terms of mortality. Notably, a significant increase can be seen in Alzheimer disease, with an almost 50% increase in DALYs since 2005.

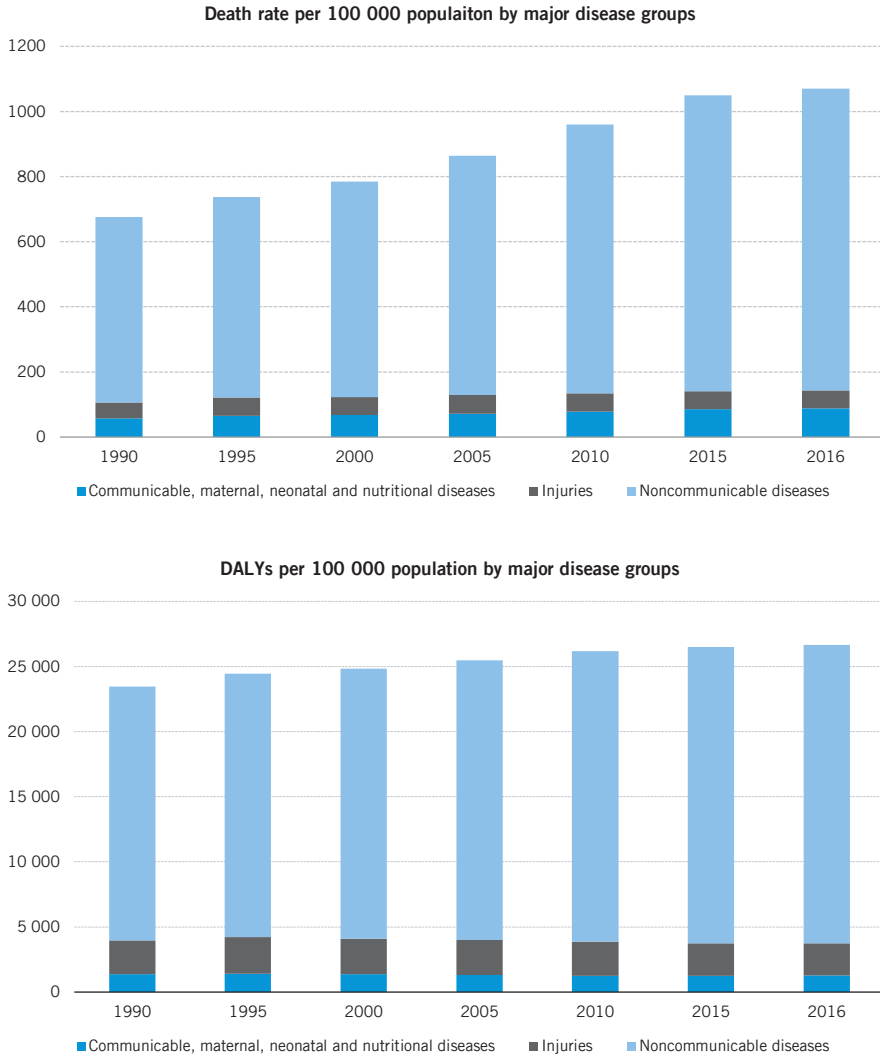
Table 7.3 Japan: Top ten causes of DALYs in 2015 and % change compared to 2005

Rank in 2015	Cause	Changes in number of DALYs (%), 2005–2015	Changes in age-standardized DALY rate (%), 2005–2015
1	Ischaemic heart disease	7.6	-14.5
2	Lower-back and neck pain	6.7	-0.1
3	Sense organ diseases	22.7	0.8
4	Cerebrovascular disease	-0.7	-21.4
5	Alzheimer's disease	49.6	3.3
6	Lower-respiratory infections	22.4	-10.8
7	Lung cancer	8.0	-11.1
8	Self-harm	-8.8	-5.3
9	Stomach cancer	-4.5	-20.6
10	Colorectal cancer	11.4	-6.4

Note: The ranking is based on the number of disability-adjusted life years (DALYs) from each cause

Source: Nomura et al., 2017

Fig. 7.1 Japan: Deaths and DALYs per 100 000 population by major disease groups, 1990–2016



Source: Institute for Health Metrics and Evaluation, 2018

Regional disparities are a growing concern. Among the 47 prefectures, the gaps between the highest and the lowest life expectancy have increased from 2.5 years in 1990 to 3.1 years in 2015; similarly, the gaps have

expanded from 2.3 years to 2.7 years for healthy life expectancy during the same period (Nomura et al., 2017). Little is known about the possible causes of regional disparities. Nomura et al. reported that there were no significant correlations between the age-standardized mortality or DALYs in 2015 and per capita health expenditure and health workforce density. Moreover, known risk factors (such as behavioural risk factors) were also uniformly distributed across prefectures. These disparities may be attributed to socioeconomic factors to some degree; however, further research is needed.

7.2.2 Risk factors

According to the GBD study, 47.1% of total deaths in 2015 were attributable to the following: behavioural risk factors accounted for 33.7% of total deaths, metabolic risks factors for 24.5%, and environmental and occupational risks factors for 6.7%.

While the Japanese population has been enjoying one of the highest life expectancies in the world, the pace of decline in mortality has levelled off since 2005. Moreover, there is an urgent need to reduce the gap between life expectancy and healthy life expectancy, and measures are required to reduce most of the attributable risk factors for both deaths and DALYs. As most risk factors linked to deaths/DALYs are modifiable, a comprehensive package of preventive measures, including a healthy lifestyle, diets and increasing coverage with antihypertensive drugs should be encouraged to ameliorate the effect of these risk factors.

Tobacco

The prevalence of smoking in the Japanese male population has dropped from 53.1% in 1990 to 31.7% in 2016, while the rates among women were almost same from 9.4% in 1990 to 9.0% in 2016 (MHLW, 2016a). However, Japan has made limited progress in reducing tobacco consumption over the past few decades compared to other OECD countries. Looking ahead to the 2020 Olympic and Paralympic games in Tokyo, there has been a movement to regulate second-hand smoke in bars and restaurants (currently there is no restriction on second-hand smoke in these venues), but the LDP is strongly opposed to such policies. This opposition is at least in part due to Japan Tobacco – the world’s third-largest tobacco company, which has

been a strong lobby on tobacco control policies in Japan. Japan Tobacco's strong connection with the government (i.e. the Minister of Finance is Japan Tobacco's biggest stockholder) makes it difficult to promote tobacco control measures in Japan.

Diabetes and hypertension

Diabetes and hypertension are the two major metabolic risk factors in Japan. The age-standardized prevalence of diabetes was 12.1% (16.3% for men and 9.3% for women) in 2016, which has been relatively stable in past decades (MHLW, 2016a). The prevalence of hypertension was 34.6% for men and 24.8% for women in 2016 (MHLW, 2016a). Salt intake is a major known cause for hypertension and, as such, lowering sodium intake has been strongly recommended. Thanks to public health programmes to promote reduction in salt intake over the past decades, the prevalence of hypertension has decreased since the 1980s. However, from 2000 onwards, there has been an increasing trend in the prevalence of hypertension among men aged 50–59 and 70–79 years; thus, further monitoring is needed for these age groups.

Body mass index (BMI)

The prevalence of obesity (BMI of 30 kg/m² or more) and overweight (BMI of 25 kg/m² or more) were only 4.5% for men and 3.3% for women in 2013, and 31.1% for men and 19.0% for women in 2016, respectively (MHLW, 2016a). The prevalence of overweight has been constant among women, while that among men has shown a constant increase from 11.9% in 1980 to 31.1% in 2016 (MHLW, 2016a). These prevalence rates are still much lower than those for other developed countries. In fact, BMIs among women of reproductive age in Japan tend to be low enough to be a cause for concern.

In conclusion, like many other developed countries, NCDs are major causes of death in Japan. Although Japan has attained favourable health outcomes such as the longest life expectancy in the world, the pace of improvement has slowed since 2005. As most risk factors linked to deaths/DALYs are modifiable, further scaling up of primary prevention and changes in lifestyle are needed.

7.3 The health system

Japan's health-care system is characterized by the universal insurance scheme, where participants are free to choose health-care facilities and access high-quality care at a relatively low price. Medical care is provided at primary, secondary and tertiary health-care facilities, while public health services are provided at regional public health centres or community health centres.

7.3.1 Organization

The Ministry of Health, Labour and Welfare (MHLW) is the central leading organization in the Japanese health-care system. The MHLW actively collaborates and cooperates with various other bodies such as the Cabinet, Ministry of Finance, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Agriculture, Forestry and Fisheries, Ministry of Economy, Trade and Industry, Japan Medical Association and Japanese Nursing Association.

Fig. 7.2 Japan: Organization chart of the Ministry of Health, Labour and Welfare

Ministry of Health, Labour and Welfare



Source: MHLW, 2017b

Decentralization

Across the 47 prefectures in Japan, there are a total of 1718 municipalities (cities, towns and villages). Based on the regional context, each prefecture is required to create detailed “medical care plans”, which aim to establish a system that provides necessary health-care services for local residents seamlessly from the acute phase to the long-term phase. Although prefectural governors are authorized to develop a medical care plan (MCP), it is commonly discussed in committees composed of representatives from local medical and dental associations, hospitals and relevant stakeholders.

Under the Community Health Act of 1947, all prefectures and high-population municipalities (population above 500 000) are required to establish a regional public health centre, which provides and coordinates a wide range of public health services, including care for mental disorders, rare diseases, communicable diseases and food poisoning. In addition, all municipalities, irrespective of their size, are also required to establish a community health centre which, in line with MHLW regulations and using the MCP framework, is in charge of community-based activities, including health promotion activities such as ANC clinics, immunization, health check-ups, counselling and screening for cancer.

7.3.2 Patient-centredness

Article 25 of the Japanese Constitution fundamentally supports patient rights in Japan by stating that “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.” Article 25 of the Constitution is the foundation of all health-care policies in Japan.

Patient organizations play a predominant role in patient advocacy. It is estimated that there are more than 3000 patient organizations in Japan, and they can participate as committee members during policy-setting meetings conducted by the MHLW. However, these patient organizations are relatively small and fragmented compared with those in the USA and the EU, which means that only a few patient organizations have significant clout over the policy-making process.

7.3.3 Financing

Earlier, Japan's health-care system was characterized as having a good quality of health-care services at a relatively low cost. However, mainly due to advanced technologies, the increasing prices of medicines and an ageing society, the current health expenditure has been climbing and is now ranked as the third highest among OECD countries. In 2017, approximately one third of the national budget was allocated to social security (health-care, pension, long-term care and welfare) (Ministry of Finance, 2017). The per capita health expenditure in Japan was US\$ 4435.6 in 2015, which was slightly higher than the OECD average of US\$ 4003.0 (OECD, 2018a). Table 7.4 shows the trends in health-care expenditure in Japan between 2000 and 2014: health expenditures paid by the public sector in Japan have been 80–85%, consistently sitting higher than the OECD average at around 70–75%, while OOP payments have been constantly low at around 14%.

Table 7.4 Japan: Trends in health-care expenditure, 2000–2014

Expenditure	2000	2005	2010	2014
Current health expenditure(% GDP)	7	8	9	11
Compulsory financing arrangement (% of CHE)	80	81	82	84
Voluntary financing arrangements(% of CHE)	20	19	18	16
Out-of-pocket payments (% of THE)	16	16	15	13

Key: GDP: gross domestic product; CHE: current health expenditure; THE: total health expenditure

Source: World Health Organization, 2018

Japan's health-care system is based on a social insurance system with tax subsidies and some amount of OOP payment, and it covers 100% of the population. All residents of Japan are required by law to enrol in a health insurance programme. For age 0–74 years, there are two main types of health insurance schemes in Japan – Employees' Health Insurance and National Health Insurance (NHI). Employees' Health Insurance covers government officials, employed workers and their dependents, while the NHI is designed for self-employed and unemployed people and is run by the municipal government (i.e. cities, towns and villages). Employees' Health Insurance is further divided into four major categories: Japan Health

Insurance Association (JHIA), Society-Managed Health Insurance (SMHI), Mutual Aid Societies (MAS) and Seaman's insurance. Those who are above 75 years of age are covered with the late-stage medical care for the elderly, which will be explained later this section.

Table 7.5 Japan: Summary of health insurance schemes

Name of insurance scheme	Target population	Number of insurers	Population coverage (%) [*]
National Health Insurance	Self-employed Unemployed Elderly	1716 municipal governments, 164 NHI societies**	28.3
Employees' health insurance			58.7
1 JHIA	Small- and medium- size companies	1	28.7
2 SMHI	Large-size companies	1409	23.0
3 MAS	Public servants	85	7.0
4 Seamen's insurance	Seamen	1	0.1
Late-stage medical care for the elderly	Elderly over 75 years of age	1716 municipal governments	13

Key: JHIA: Japan Health Insurance Association; SMHI: Society-Managed Health Insurance; MAS: Mutual Aid Societies

Notes: ^{*}Those who are aged 75 years and above are covered with an independent insurance scheme (called the late-stage medical care system for the elderly), and thus the sum of NHI and Employees' Health Insurance is not 100%. ^{**} In general, insurers of the NHI are the municipal government; however, some NHIs have grouped to create NHI societies to have a larger financial pool, and is now accounted for 164 societies.

Source: MHLW, 2016b

As shown in Table 7.5, Japan's health insurance system does not have a single pool, but rather insurers are divided into approximately 3000 organizations. Financial disparities between the NHI and Employees' Health Insurance have been of major concern in recent decades. In particular, with urbanization and an ageing society, the size of risk pools in the NHI has changed significantly and now many smaller municipalities face declining funding and increasing health expenditures. Moreover, although there are several cross-subsidy mechanisms among various insurance schemes, premium rates largely differ across municipalities. This fragmented insurer system remains a source of systemic inefficiency and premium inequities.

For OOP payments, the rate is set as follows: pre-elementary school² = 20% of total health-care cost; elementary school up to age 69 years = 30%; age 70–75 years = 20%; and age 75 years or above = 10%. Although the OOP payment rate of 30% for elementary school up to age 69 years is relatively high by international standards, there is a monthly and annual cap on OOP payments for individuals and households. Patients are required to pay 30% of health-care costs up to the cap every calendar month, but are required to pay only the cap amount plus 1% of total health-care costs if the cap is exceeded. The monthly cap for the household is set between US\$ 312 and US\$ 2228, based on income. Thanks to this cap payment system, the OOP payment as a percentage of THE in Japan has remained around 14%, which is constantly lower than the OECD average.

Late-stage medical care system for the elderly

To reduce the disparities between the NHI and Employees' Health Insurance, the government introduced a late-stage medical care system for the elderly in 2008, which separated the elderly aged 75 years and above from the exiting health insurance system. The late-stage elderly contribute premiums of approximately 10% of total expenditure, which is deducted from their pensions. The remaining funds for the late-stage medical care system for the elderly is financed by government subsidies (50%) and contributions by the working population (40%).

Another unique trait of the Japanese health financing system is the uniform fee schedule, where all prices for health-care procedures, medical devices and pharmaceuticals are determined by the MHLW and are covered under the national insurance system. Once every two years, the MHLW reviews the scope of coverage by the national insurance scheme and the reimbursement billing conditions for procedures, drugs and medical devices. All hospitals and clinics, including private care facilities, are required to comply with the nationally uniform fee schedule set by the MHLW.

² Elementary school in Japan starts at 6 years of age.

7.3.4 Physical and human resources

In Japan, there were 8442 hospitals, 101 529 clinics and 68 940 dental clinics in 2016 (MHLW, 2016c). Among them, privately owned hospitals numbered 6849 (81.1%), of which 5754 (68.2%) are owned by non-profit medical corporations, 240 (2.8%) solely owned by private individuals, and 855 (10.1%) owned by others, including non-profit public corporations, non-profit school corporations and private medical schools. Although privately owned, they are strictly regulated by the Central Government in terms of price-setting and provision of services (i.e. the prices of health-care procedures are set under the uniform fee schedule). The remaining 1593 hospitals are government- or prefecture-owned hospitals.

Compared with other OECD countries, inpatient care in Japan is characterized by longer-than-average hospital stays, with a larger number of inpatient beds per capita. Although the government has promoted a decrease in the total number of inpatient beds, Japan still had 13.2 hospital beds per 1000 population in 2015, which was significantly higher than the OECD average of 4.9 beds per 1000 persons (OECD, 2016). The average length of hospital stay in Japan for acute care was 16.5 days in 2015, which was also longer than the OECD average of 6.8 days (OECD, 2018b). Japanese hospitals are generally well equipped with high-technology devices, such as computed tomography (CT) and magnetic resonance imaging (MRI) scanners. The number of CT scanners per 1000 population is 0.101, compared with a mean of 0.024 in other OECD countries. The number of MRI scanners per 1000 population is 0.047, which is also higher than that of the OECD average of 0.014.

In 2014, Japan had a relatively small number of physicians (2.35 per 1000 persons) but more nurses (9.06 per 1000 persons) when compared to other OECD countries (OECD average density is 3.02 and 8.03, respectively) (OECD, 2016). Like other countries, the uneven distribution of the health workforce in terms of specialty (especially for physicians) and locations, inadequate training system, and task-shifting is a major concern.

7.3.5 Provision of services

The Japanese health-care system does not necessarily distinguish between primary and secondary care, and there is no gate-keeper system. Historically, Japan did not have a general practitioner system, and most physicians chose a specialty without any national accreditation (i.e. physicians could freely profess their specialty to be internal medicine, surgery, paediatrics, etc.). Patients often go to secondary health-care facilities even with mild symptoms, and secondary health-care services are accessed directly at an affordable cost (set at a standard rate regardless of specialty, location, public/private facilities under the fee schedule) without the need for a referral from a primary health-care facility. These secondary services can be provided locally at small clinics or treatment centres, or at outpatient departments of larger hospitals that would be considered tertiary-care centres in a gate-keeping system.

Although hospital outpatient services are available without a referral, the government introduced a referral system for the use of tertiary-care services through clinic services. Patients without referral letters from primary care clinics are now required to pay at least US\$ 50 at the reception of large hospitals, such as university hospitals. However, the difference between primary and secondary health-care facilities remain vague. Some community-based clinics are often equipped with advanced technologies such as MRI machines, enabling the provision of hospital-level services at local clinics.

Management of NCDs

The Health Promotion Act was promulgated in 2002, requiring prefectural and municipal governments to develop health promotional plans and governments at all levels to monitor NCDs for effective health promotion (Ezoe et al., 2017). Under this Act, the MHLW promoted the “National Health Promotion Movement in the 21st century” (abbreviated as “Health Japan 21”) as a goal-oriented health promotion measure for the prevention of NCDs (Sakurai, 2003). The fundamental goals of “Health Japan 21” are:

- to improve healthy life expectancy and reduce health inequalities;

- to prevent the onset and progression of NCDs;
- to maintain and improve functions necessary for a healthy social life;
- to create a social environment in which individual health is protected and healthy behaviours are supported; and
- to improve lifestyle-related factors affecting health, such as nutrition, physical activity and other risk factors.

As part of preventive measures against NCDs, three types of health check-ups target the general population in Japan: (i) general health check-ups; (ii) specific health check-ups and specific health guidance (SHCSHG); and (iii) cancer screening. All employers are required by the Industry Safety and Health Act to provide general health check-ups to all employees at the time of contract as well as once every year. It includes (i) past medical history and occupation; (ii) subjective and objective symptoms; (iii) height, weight, vision and hearing; (iv) chest X-ray; (v) blood pressure; (vi) anaemia (complete blood count); (vii) liver function; (viii) cholesterol; (ix) diabetes mellitus; (x) urine analysis; and (xi) ECG. All costs are paid by the employers; individual workers do not pay for check-ups.

In addition to general health check-ups, the MHLW introduced in 2008 a nationwide screening programme for NCDs, called SHCSHG. Under this programme, all insurers are mandated to conduct SHCSHG for enrollees aged 40–74 years. This programme expands on general health check-ups to include a wider range of items and, based on the results, specific health guidance is offered to the participants identified as having risk factors for NCDs. All costs are covered by insurers; individuals are not required to pay for SHCSHG.

In 1983, the Japanese Government started to subsidize stomach and uterine cancer screening, followed by screening for lung, colon and breast cancer. At that time, no other country provided publicly funded cancer screening. However, compared with other developed countries, the screening rates in 2013 remained low at 45.8%, 41.4% and 47.5% for stomach, colon and lung cancer screening for men, respectively (National Cancer Center, 2017; Tsuji, 2009).

Management of communicable diseases, including emerging diseases

The Infectious Disease Surveillance Center (IDSC) was established under the National Institute of Infectious Disease (NIID) with the purpose of surveilling all targeted infectious diseases, which are divided into five categories according to the urgency of notification and severity. Based on the Infectious Disease Control Law of 1995, the IDSC conducts nationwide surveillance of infectious diseases and, according to disease category, collects data on the detection of infectious disease both/either from prefectural public health institutions and/or sentinel clinics and hospitals across Japan.

Under the Preventative Immunization Law, Japan started routine immunization services in 1948. The vaccine schedule was periodically revised and the country now maintains a childhood vaccination programme that is broadly consistent with the WHO-recommended vaccination schedule. The routine immunization for children includes bacillus Calmette-Guerin (BCG), measles–rubella (MR), varicella, hepatitis B, DPT-IPV (diphtheria–tetanus–pertussis and inactivated polio vaccine), Japanese encephalitis, pneumococcal, *Haemophilus influenzae* type b (Hib) and human papillomavirus (HPV). In addition, influenza vaccine is also provided to the elderly and at-risk populations. The entire cost of all the aforementioned vaccinations is covered by tax subsidies.

Management of MCH

There were approximately 1 000 000 births in Japan in 2015. The IMR was 2.0 per 1000 live births while the MMR was 5.0 per 100 000 live births in 2015, both of which are among the lowest in the world (World Bank, 2018b).

The Maternal and Child Health Act, 1965 entitles babies to free, publicly funded preventive health services, including access to the MCH Handbook (growth notes and medical records from during the pregnancy until 6 years of age), continued guidance and consultation with public health nurses for all newborn babies (additionally, extensive counselling is provided for underweight babies less than 2500 g), multiple births, single-mother households, and cases of suspected of child abuse, mass screening for congenital metabolic diseases, and routine immunizations. Newborns are

also entitled to well-baby check-ups three times within the first 3 years of life (3–4 months, 18 months and 3 years of age), which are provided at no cost by the municipal government. Moreover, most municipalities provide free additional health check-ups for infants and children up to five times.

The “Healthy parents and children” scheme was launched in 2001 and has started its second iteration in 2015. The scheme aims to improve health standards of mothers and children and set specific targets and indicators. Most MCH projects conducted both by the central and local governments are in line with the “Healthy parents and children” scheme. Areas of priority include: (i) seamless provision of public health measures for pregnant women and infants; (ii) public health measures for school-age children, from adolescence to adulthood; and (iii) development of a community that is supportive to children and their family members. Currently, particular countermeasures against child abuse are being taken. The number of cases of child abuse has increased from 11 631 in 1999 to 88 931 in 2014. As of April 2017, 210 child welfare offices were in charge of prevention of and response to child abuse. In 2007, each municipal government was required to set up a regional council for children requiring aid, with the goal of early detection and response to cases of potential child abuse. Although several countermeasures have been introduced, the number of child abuse cases has continued to increase and further efforts are needed.

7.4 Performance of the health system

7.4.1 Effectiveness and quality

Empirical evidence is scarce regarding the quality of primary health-care services in Japan. Hashimoto et al. (2011) showed that, compared to the USA, effective coverage for control of hypertension and hyperlipidaemia was much less in Japan. Using an administrative dataset, Tanaka et al. (2016) also reported that clinical practices for control of diabetes, including screening for complications of diabetes, are of relatively poor quality in Japan compared to those of the USA and European countries. These concerns might be attributable to relatively low rates of compliance to guidelines, limited opportunities for training in general practice, and the

division between preventive and curative services in Japan (Hashimoto et al., 2011).

According to the OECD Health Statistics 2015, the quality of acute care services in hospitals in Japan showed poor performance for acute myocardial infarction (AMI). The death rate due to AMI in Japan was 12%, compared with the OECD average of 8.0%. However, according to the national databases that cover around 90% of acute care hospitals in Japan, the in-hospital mortality rate due to AMI was around 7.2%, suggesting that databases need to be refined for cross-country comparisons (Sakamoto et al., 2018).

Moreover, evaluation of performance is still limited for outpatient services and chronic-care inpatient services. These data are covered mainly by the national database, which was primarily intended to facilitate reimbursements under the unified fee control schedule. As this database was not intended for research purposes, crucial data needed to determine service efficacy are often missing.

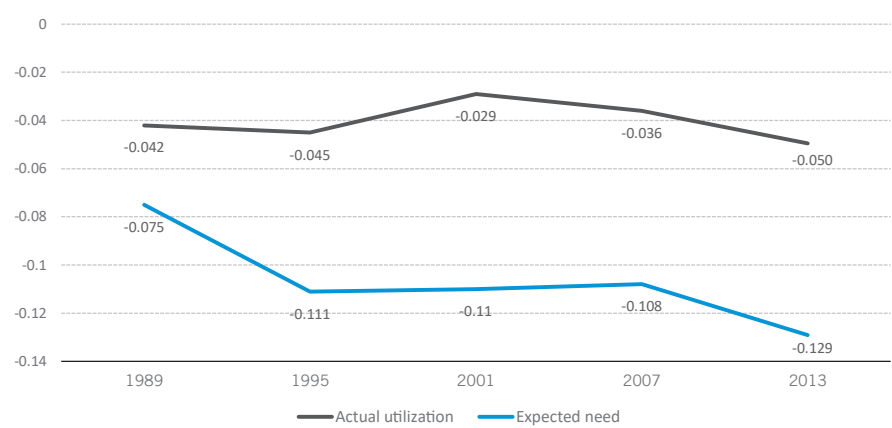
For data-driven, evidence-based policy-making, the government has slowly but steadily evolved its policy to make data available for open public use. However, the organizational infrastructure needed to improve the quality of data and to support wider use is lacking.

7.4.2 Accessibility

Watanabe and Hashimoto (2012), using methodology originally proposed by Wagstaff et al. (1991), measured horizontal inequality – in accessing a health-care facility by using cross-sectional, nationally representative household surveys. Horizontal inequality is calculated as the difference between two types of concentration indices – acute health-care visits over a household's income level and expected health-care needs based on demographic and clinical conditions. By using the dataset from the Comprehensive Survey of People's Living Condition, they calculated horizontal inequality in Japan and the results are presented in Fig. 7.3. The horizontal inequality (gaps between two indices) was negative, indicating that people with a lower household income were likely to withdraw health-care use despite their health care needs. This gap was at its largest in

2001, though it jumped back to approximately -0.05 in 2007 (Sakamoto et al., 2018).

Fig. 7.3 Japan: Horizontal equity in access to health care (concentration indices over household income), age 20+ years, 1989–2013

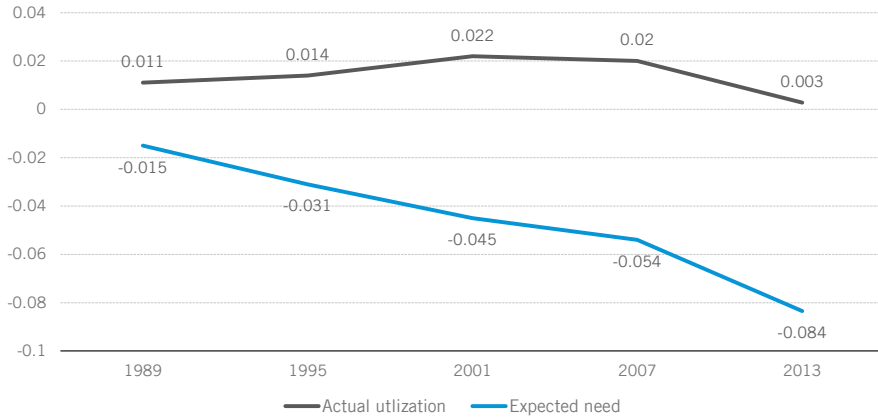


Notes: Actual utilization: concentration indices for actual health-care use; expected need: concentration indices for expected health-care needs (estimated health status)

Source: Sakamoto et al., 2018

Fig. 7.4 and 7.5 show horizontal inequality in access to health care for two age groups (20–64 years and 65 years and above, respectively). Compared with the younger group, horizontal inequality has been low in people aged 65 years and above, presumably due to the reduced co-payment rate, which contributes to equalizing health-care utilization regardless of income levels among the elderly. However, a further decline in horizontal inequality is seen in 2013 among the older age group, which may be an early sign of the declining household capacity to pay for health-care costs due to economic stagnation. Further monitoring is required to assess this trend (Sakamoto et al., 2018).

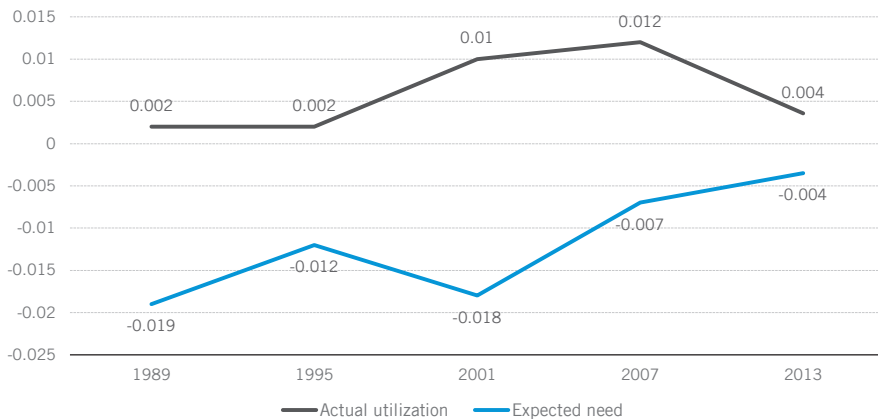
Fig. 7.4 Japan: Horizontal equity in access to health care (concentration indices over household income), age 20–64 years, 1989–2013



Notes: Actual utilization: concentration indices for actual health-care use; expected need: concentration indices for expected health-care needs (estimated health status)

Source: Calculated by Hashimoto from MHLW, 2016d

Fig. 7.5 Japan: Horizontal equity in access to health care (concentration indices over household income), age 65+ years, 1989–2013



Notes: Actual utilization: concentration indices for actual health-care use; expected need: concentration indices for expected health-care needs (estimated health status)

Source: Calculated by Hashimoto from MHLW, 2016d

It is worth noting that the Japanese health-care system does not adequately address the cultural needs of ethnic minorities, especially with respect to language barriers and religious backgrounds. Some efforts are being made in this direction as part of the preparations for the 2020 Tokyo Olympic and Paralympic games, foreseeing that there will be many foreign patients at that time. However, systematic and empirical evidence is scarce, making it difficult to assess the magnitude and severity of this problem.

7.4.3 Resilience

The likelihood of rising expenditure poses risks to fiscal sustainability. The ageing population and increases in the prices of medicines and medical devices have been pushing the total health-care expenditure, which has put a significant burden on the health-care system in Japan. To tackle this challenge, in 2008, the government (both the ruling party and the opposition party) agreed to pass the “Comprehensive Reform of Social Security and Tax”, a joint reform of the social security and taxation system that should improve fiscal sustainability for the health and long-term care system in Japan. It originally planned to raise the consumption tax, with any additional funds from it being channelled for social security costs, including health and long-term care. Though the current Abe Cabinet originally planned to increase the consumption tax rate to 10% in October 2015, it has been postponed to September 2019, which has delayed social security and taxation reform. An increase in the consumption tax being a big political issue, the future progress of reform remains unclear.

Integrated community care system (ICCS)

A majority of the elderly wish to stay in their homes during the very end of their lives. However, because of the increase in the number of unmarried people, single-person households and parent-child separated households, more elderly persons are living alone. Consequently, it is difficult to provide arrangements for them to die at home (78.4% die at health-care facilities). In response to this, the government promoted an Integrated Community Care System (ICCS) in 2006. This system aims to provide appropriate living arrangements, social care and daily life support services within the community as well as integrate prevention, medical services and long-term care for the elderly.

Twelve years since its adoption in 2006, the ICCS continues to be the central core policy of health and long-term care in Japan. However, several challenges remain: how to encourage local stakeholders to participate in the community discussion, how to channelize diverse interests to evolve a consensus on efficient allocation of resources, and how to meet bureaucratic demands both at the central and local government levels.

7.5 Conclusions

Thanks to the overall efficiency of its health system and parallel advances in technology, Japan has for many years enjoyed increased life expectancy, decreased maternal and infant mortality, and a reduced burden of communicable diseases. However, the Japanese health-care system faces several challenges, including an ageing society, increasing health-care expenditure, economic stagnation and increasing inequity, all of which place a heavy burden on the current health-care system.

Fundamentally, what Japan needs is a health-care paradigm shift. Such a shift in Japan's approach to health care has already been proposed in *Japan vision: health care 2035*, a report drafted by young Japanese leaders in health care under the leadership of the then minister Yasuhisa Shiozaki. The goal of *Japan vision: health care 2035* is to build a sustainable health-care system that delivers better health outcomes through care that is responsive and equitable to all members of society, and that contributes to prosperity in Japan and the world. Bearing in mind these transformations by 2035, fundamental reforms that focus on outcomes, quality, efficiency, care and integrated approaches across sectors will be necessary to maintain a low-cost, equitable health system in the future (Miyata et al., 2015).

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