

Financing of the healthcare systems in Japan and the UK

Tetsuo Fukawa

1. Introduction

Since the 1990s Japan has been experiencing a rapidly aging population coupled with a low birth-rate. Japan enjoys the lowest infant mortality rate and the longest life expectancy at birth among the major developed countries. Yet, Japanese healthcare expenditure as a percentage of GDP is low comparatively. Those countries spending particularly low amounts on healthcare per capita tend to have higher infant mortality rates and lower life expectancy at birth, and the levels achieved for these key health indicators in the UK are in the middle among OECD countries (OHE, 2007). However, these are no longer sufficient indicators for evaluating healthcare systems.

With increased international competition, informalization of employment and the progressing of an ageing society, high-income countries face strong challenges in maintaining personal coverage and benefit levels (van Ginneken, 2007). Each country aims for a better balance between solidarity and individual responsibility, whether it is based on the social insurance model or the tax-financed model. Aging of the population is faster and more severe in Japan than in the UK. Healthcare services are mainly financed by social insurance in Japan, whereas they are provided as social services in the UK. GPs act as gatekeepers in the UK, which is not the case in Japan. However, many important similarities can be drawn between the healthcare systems in Japan and the UK. Health expenditure in both countries is low due to the fact that payments for healthcare services are predominantly controlled by the central government. Health is important and the availability of health services to all has helped to raise the quality of life and social equity in both countries.

The function of risk-pooling through public health insurance and long-term care insurance has been well appreciated by the Japanese people, and the safety-net function is perceived to increase the quality of life throughout the lifecycle. Japanese health insurance is divided into various programs, but coverage is quite egalitarian in terms of burdens as well as benefits through an intricate set of cross-subsidization mechanisms (Campbell, 1996). Solidarity between patients and non-patients remains the same, but solidarity between young and old may

be changing in Japan (Fukawa, 2007). It will be a key factor in the Japanese healthcare reform to institute financing mechanisms designed to incentivize higher quality and greater efficiency.

Financing of a healthcare system for the elderly is still a serious issue in Japan, and the Japanese healthcare delivery system raises many questions such as quality issues, overuse of pharmaceuticals and a shortage of doctors in particular specialties and regions. There is some room to reduce healthcare expenditure for Japanese elderly. Higher patients' cost-sharing may cause under-use of healthcare services among the low-income population. After conducting comparison of healthcare systems between Japan and the UK in terms of financing, this paper aims to identify the most important issues in each country and draw implications for the Japanese healthcare reform.

2. Comparison of healthcare systems in Japan and the UK

It is useful to examine the relative position of Japan and the UK among developed countries in terms of health service capacity, health manpower, and health expenditure/GDP, before comparing the healthcare systems of the two countries.

2.1 Comparison in six countries

The number of hospital beds per 1,000 population is very high in Japan, and as a natural consequence of the surplus of beds together with the under-developed division of hospitals for acute and chronic diseases, the average length of stay (ALOS) is very long in Japanese hospitals (Table 1). The number of NHS hospital beds per 1,000 population in the UK has dropped from a peak of 11.0 in the 1950s to 3.9 in 2004. The number of available acute NHS hospital beds has changed only slightly for more than a decade and is still low by international standards. However, such differences are difficult to interpret: for some OECD countries, private hospitals and/or nursing homes are included in the figures, but they are not in the UK figures (OHE, 2007). The number of doctors per 1,000 population has been substantially lower in the UK than in most other developed countries of about 3 per 1,000 population, however the number for Japan is even lower.

There is a wide range of variation in health expenditure regardless of whether it is mainly based on social insurance or tax-financed, and interestingly enough the aging rate (the proportion of those aged 65 or over to the total population) seems unrelated to the level of health expenditure across countries (Fukawa, 2007). The Japanese aging rate is the highest among the six countries shown in Table 1, yet Japan has the lowest total expenditure on health as a percentage of GDP.

The reasons for the lower health expenditure in the UK may be traced to the lower prices of inputs (notably medical and other clinical staff, pharmaceuticals, and medical devices) and the lower availability of high technology medical devices, notably MRI units and CT scanners (Palmer and Theresa Ho, 2008). The slower relative growth of the hospital sector in the UK reflects a deliberate political switch towards primary and community-based healthcare. As a result, the share of the NHS resources allocated to the hospital services has fallen from 70 percent in 1972 to 46 percent in 2005 (Note 1), although the UK still devotes proportionally more of its healthcare resources to hospital services than do many other developed countries (OHE, 2007). The UK spends less of its national income on medicines (including over-the-counter

medicines) than any other major industrialized country: 1.1 percent of GDP in 2005 compared with 1.6 percent in Germany and 1.8 percent in France (OHE, 2008).

Some portions of healthcare services are paid outside public systems. According to OECD Health Data, private healthcare expenditure ranges between 1.1 and 2.5 percent of GDP except in the United States. The share of the private sector is in fact larger than the public sector in the US healthcare system. The share of private health expenditure is the lowest in the UK. The role of private health insurance has so far been relatively minor in terms of healthcare financing in Japan, although the private sector is important in delivering healthcare services and maintaining public health.

Fig. 1 shows the percentage of the total health expenditure that is tax-based or financed by social health insurance in 12 countries, following the example of Mossialos and Dixon (2002). The distance from the diagonal line indicates the share of private expenditure. The UK is among the countries with a predominantly tax-based system, and Japan is among the countries whose healthcare system is financed predominantly via social health insurance. Therefore, Japan and the UK show a sharp contrast in the mix of healthcare financing

Table 1 Health related indices in 6 countries: 2005

	France	Germany	Japan	Sweden	UK	USA
Total population (million)	60.9	82.5	127.8	9.0	60.2	296.4
Proportion of 65+ (%)	16.4	19.2	20.0	17.3	16.0 ^a	12.4
GDP (100 billion US\$, PPP)	21.5	28.0	45.5	3.6	22.3	124.0
Per capita GDP (1,000 US\$, PPP)	30	31	31	32	33	42
Total fertility rate (TFR)	1.94	1.34	1.26	1.77	1.80	2.05
Life expectancy (years)	80.3	79.0	82.0	80.6	79.0	77.8 ^a
Infant mortality (Per 1,000 Births)	3.6	3.9	2.8	2.4	5.1	6.8 ^a
Health manpower (Per 1,000 pop)			a	a		
Physicians	3.4	3.4	2.0	3.4	2.4	2.4
GP	1.7	1.0	—	0.6	0.7	1.0
Dentists	0.7	0.8	0.7	0.8	0.5	...
Pharmacists	1.2	0.6	1.3	0.7	0.6	0.8 ^a
Nurses	7.7	9.7	9.0	10.6	9.1	...
Hospital beds (Per 1,000 pop)						
Total	7.5	8.5	14.1	...	3.9	3.2
Acute care beds	3.7	6.4	8.2	2.2	3.1	2.7
Long-term care beds	1.2	...	3.0	0.3	0.1	...
ALOS: in-patient care (Days)	13.4	10.2	35.7	6.1	7.0	6.5
acute care (Days)	5.4	8.6	19.8	4.6	6.1	5.6
Per capita per annum						
Acute care beddays	1.0	1.8	2.1	—	0.9	0.7
Doctors' consultations a	6.6	7.0	13.8	2.8	5.3	3.8
Health expenditures (HE)/GDP (%)	11.1	10.7	8.0 ^a	9.1	8.3	15.3
Public HE/GDP	8.9	8.2	6.6 ^a	7.7	7.2	6.9
Private HE/GDP	2.2	2.5	1.5 ^a	1.4	1.1	8.5

a 2004

Source: OECD Health Data 2007.

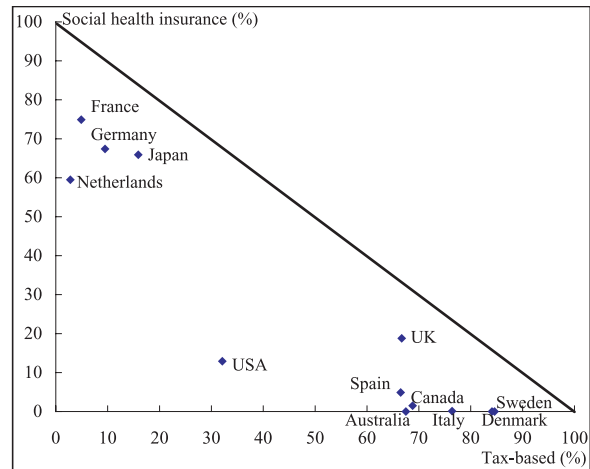
method. However, the low share of private expenditure is common in both countries. Private health insurance is expected to grow in Japan as patients' cost-sharing has increased to 30 percent of healthcare costs (with upper ceiling). Although private health expenditure in the UK has increased steadily since 1973, it still only represented 1.2 percent of GDP in 2005 (OHE, 2008). Evidence suggests that healthcare systems that are based mainly on social health insurance tend to be regressive; those that are tax-based tend towards progressivity; and those that are based predominantly on private health insurance are highly regressive (Morris, Devlin and Parkin, 2007).

Fig. 2 shows public and private expenditures on health in six countries based on the OECD Health Data. It is noticeable that the proportion of expenditure financed from public sources, over 70 percent in most developed countries, is as low as 45 percent in the United States. Nursing and residential care account for a portion of health expenditures, and the sum of (a) hospital services, (b) ambulatory care, (c) pharmaceuticals and medical goods, and (d) public health, which is shown by dotted line for public health expenditure in Fig. 2, is more comparable, eliminating nursing and residential care expenditure partially included in the healthcare system, although the data are not available for Sweden and the UK. There are still considerable differences in the sum of (a) to (d) for total health expenditure: 12.8 percent for the US, 9.1 percent for France, 8.5 percent for Denmark and Germany, around 8 percent for Australia and Canada, 7.4 percent for Spain and Japan, and 7.1 percent for the Netherlands. However, these figures are more stringent compared to the original figures including some nursing and residential care expenditures.

2.2 Japan-UK comparison

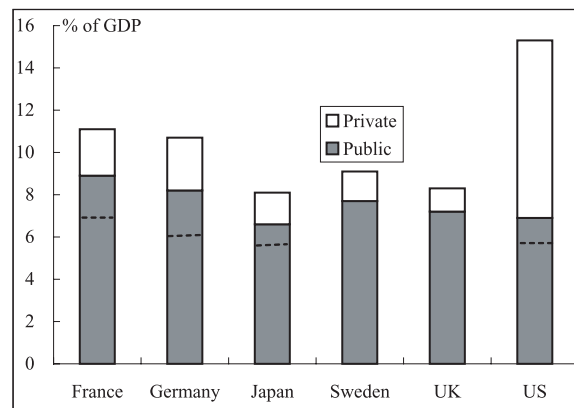
Most healthcare services in Japan are provided through the public health insurance system. The total population, except those who receive public assistance, is covered by the public health insurance, and there are hundreds of separate sickness funds (or insurers) linked to a person's employer, occupation, or geographic location. Insured persons cannot choose a sickness fund. While there are many similarities among sickness funds in terms of health services covered and reimbursement procedures for services provided, there are systematic differences in available benefits and level of national subsidy. All sickness funds cover a broad range of healthcare services, but health insurance covers little preventive care in general. Public health insurance is financed through contributions (individuals as well as employers), government

Fig. 1 Percentage of the total health expenditures that is tax-based or financed by social health insurance in 12 countries: 2005



Source: OECD Health Data 2007.

Fig.2 Expenditure on Health in 6 countries: 2005



Note: Dotted line shows the sum of (a)~(d) below within the public expenditure on health: (a) hospital services, (b) ambulatory care, (c) pharmaceuticals and medical goods, and (d) public health.

Source: OECD Health Data 2007.

subsidies and patients' payment (patients' cost-sharing + direct patients payment for services not covered by insurance). Previously, patients' cost-sharing varied among different schemes, but it has been unified to 30 percent of healthcare costs for non-elderly patients, and 10 or 20 percent for elderly patients. Moreover, there is an upper ceiling on patients' cost-sharing, and all sickness funds pay 100 percent of expenses above the upper ceiling (Note 2).

Patients are free to choose physicians and hospitals, although there are some restrictions. Both inpatient and outpatient services are provided in Japanese hospitals. While hospitals may benefit from economies of scope, there is severe competition in outpatient services between hospitals and physicians (Fukawa, 2005). Most healthcare

services are reimbursed on an itemized fee-for-service basis, and the price of each service is specified in the Medical Fee Schedule and the drug standard. A uniform nationwide fee schedule is applied to physicians and hospitals. Some partial price bundling has been implemented mainly for chronic diseases of the elderly since the 1990s, and a feasibility study of a prospective payment system has been conducted since 2003 for inpatient services.

Characteristics of public healthcare systems in Japan and the UK are listed in Table 2. Major characteristics of the UK public healthcare system are summarized as follows (Palmer and Theresa Ho, 2008):

- Most services, including hospital and medical services, are free to patients. The whole population is covered by the NHS.
- General practitioners act as gatekeepers for the healthcare system; referrals to the hospital and specialist practitioners are made via the general practitioners.
- Hospital-based specialists are compensated on a salaried basis. However, there has been a recent proposal for fee-for-service (FFS) remuneration for surgeons. The payments to general practitioners are

based on capitation, but with some FFS payments to encourage the provision of services such as preventive care.

- There is a small but growing private sector including the provision of hospital services and private health insurance. Private payments including out-of-pocket expenses for dentistry and other services represent only about 16 percent of all health expenditure.
- Total health expenditure per capita and the proportion of GDP per capita represented by health expenditure are lower than that of most comparable OECD countries. The per capita value of health expenditure in purchasing power parity (PPP) US Dollars is approximately half that of the United States.

Total healthcare expenditure in the UK rose to 9.4 percent of GDP in 2007 compared with 8.0 percent of GDP in 2004 in Japan, and the gross cost of the NHS rose to 8.1 percent of GDP (OHE, 2008). Developments of health expenditures in Japan and the UK are shown in Table 3. UK expenditure on healthcare has always been comparatively low, but since 2000 a major increase in expenditure on the NHS has been a key policy aim of the

Table 2 Public healthcare system in Japan and the UK

	Japan (Public health insurance)	UK (NHS)
Coverage of population	<ul style="list-style-type: none"> • 99 % • different schemes for employees and self-employed 	<ul style="list-style-type: none"> • 100 %
Benefit		
Outpatient	<ul style="list-style-type: none"> • 70 % of the cost 	<ul style="list-style-type: none"> • 100 % of the cost with small charge
Inpatient	<ul style="list-style-type: none"> • 70 % of the cost with additional cost-sharing for meals 	<ul style="list-style-type: none"> • 100 % of the cost
Main source of finance	<ul style="list-style-type: none"> • Social health insurance 	<ul style="list-style-type: none"> • Tax revenue
Access to hospitals	<ul style="list-style-type: none"> • free 	<ul style="list-style-type: none"> • referrals to hospitals and specialist practitioners are made via the general practitioners (GPs)
Reimbursement system	<ul style="list-style-type: none"> • Clinics: fee-for-service (FFS) • Hospitals: FFS with some price bundling 	<ul style="list-style-type: none"> • GPs: capitation with some FFS payments • Hospital-based specialists: salary • Hospitals: total budget
Health service delivery	<ul style="list-style-type: none"> • bed pop ratio is quite high, but physician pop ratio is lower than that of Germany 	<ul style="list-style-type: none"> • bed pop ratio is low • there is a small private sector including the provision of hospital services and private health insurance
Health expenditure	<ul style="list-style-type: none"> • per capita expenditure for 65+ was 4.1 times of per capita expenditure for 0-64 • improper use of hospital beds 	<ul style="list-style-type: none"> • Total health expenditure per capita and the proportion of GDP per capita represented by health expenditure are lower than that of most comparable OECD countries.
Performance	<ul style="list-style-type: none"> • long life expectancy and low infant mortality • ALOS is long 	<ul style="list-style-type: none"> • life expectancy and infant mortality are close to the OECD average

Source: Palmer and Theresa Ho (2008) for the UK.

Table 3 Trends of population and health expenditures in Japan and the UK

Year	GDP	Population			Life expect. at birth (year)	Public health expenditure ^a			Health expenditure ^b		ALOS ^c (days)
		Total	65+	TFR		% of GDP	Patients' payment (%)	(% of GDP)			
		(million)	(%)					Total	Public		
Japan	(tril. yen)					(tril. yen)					
1960	16.7	94.3	5.7	2.00	67.8	0.41	2.5	30.0	3.0	1.8	57.3
1970	75.3	104.7	7.1	2.10	72.0	2.50	3.3	19.3	4.6	3.2	55.3
1980	246.3	117.1	9.1	1.80	76.1	11.98	4.9	11.0	6.5	4.7	55.9
1990	450.0	123.6	12.0	1.54	78.9	20.61	4.6	12.1	6.0	4.6	50.5
2000	504.1	126.9	17.3	1.36	81.2	30.14	6.0	13.4	7.7	6.2	39.1
2005	503.4	127.8	20.1	1.26	82.0	33.13	6.6	14.4	8.0 ^d	6.6	35.7
UK	(£ billion)					(£ billion)					
1960	26.05	52.4	11.9	2.72	70.8	0.88	3.4	5.1	3.9	3.3	36.0 ^a
1970	52.93	55.6	13.2	2.43	71.9	2.05	3.9	3.1	4.5	3.9	26.0 ^a
1980	237.00	56.3	15.1	1.90	73.2	11.68	4.9	2.4	5.6	5.0	19.0 ^a
1990	567.39	57.2	15.9	1.83	75.7	29.18	5.1	4.1	6.0	5.0	17.6
2000	971.32	58.9	15.8	1.65	77.8	58.28	6.0	1.8	7.3	5.9	8.5
2005	1249.28	60.2	16.1	1.80	79.0	97.23	7.8	1.3	8.3	7.2	7.0

Note: a: national source

b: OECD Health Data 2007

c: ALOS = Average length of stay: inpatient care; OECD Health Data 2007

d: 2004

Source: IPSS (2007), MHLW (2007), National Health Expenditure in FY 2005, OHE (2008), Compendium of Health Statistics 2008.

Labour government (Talbot-Smith and Pollock, 2006). As shown in this table, public health expenditures in both countries derived from national sources are more or less the same as public health expenditure in the OECD Health Data. For the Japan-UK comparison hereafter, we use national sources instead of the OECD Health Data.

Table 4 and Fig. 3 show per capita public health expenditure by age group (a) as expressed by percent of per capita GDP or (b) relative to age group 5-15. The UK data are based on the NHS expenditures on hospital and community health services (HCHS) per capita expenditure by age groups in England (**Note 3**). The highest per capita

Table 4 Per capita health expenditure by age group

(a) As percent of per capita GDP

FY	Japan					England				
	0-4	5-14	15-64	65-74	75+	0-4	5-15	16-64	65-74	75+
1980						3.5	1.5	2.0	7.0	17.2
1990						3.0	1.4	2.0	5.2	11.9
2000	3.4	1.7	3.1	10.7	16.6	4.4	1.3	2.5	6.5	13.6
2005	4.1	1.8	3.3	10.4	16.3	4.5	1.2	2.7	7.6	15.0

(b) Relative to age group 5-15

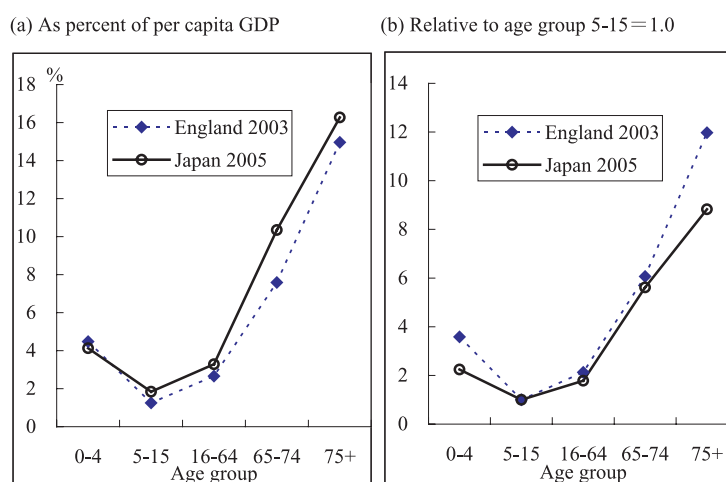
FY	Japan					England				
	0-4	5-14	15-64	65-74	75+	0-4	5-15	16-64	65-74	75+
1980						2.4	1.0	1.3	4.8	11.8
1990						2.2	1.0	1.5	3.8	8.8
2000	2.0	1.0	1.8	6.3	9.8	3.5	1.0	2.0	5.2	10.8
2005	2.2	1.0	1.8	5.6	8.8	3.6	1.0	2.1	6.1	12.0

Note: 2005 for England means 2003.

Sources: MHLW (2007), National Health Expenditure for FY 2005.

OHE (2007), Compendium of Health Statistics 2007.

Fig. 3 Per capita public health expenditure by age group



Sources: MHLW (2007), National Health Expenditure for FY 2005.
OHE (2007), Compendium of Health Statistics 2007.

spending on HCHS was for those aged 75 or over, and the lowest for those in the age group 5-15. Financing and delivery of health services are quite different between Japan and the UK, as stated above. However, the spending patterns by age are quite similar in the two countries, although there is considerable underestimation in Fig. 3 (a) as stated in Note 3. The situation for the 75 or over age group in Fig. 3 (b) is interesting. The number of so-called socially-induced hospitalization cases especially among elderly patients has been reduced by 2005, although not totally eliminated, after the implementation of long-term care insurance in April 2000 in Japan. On the other hand, in the UK, a certain proportion of long-term care expenditure is included in the NHS.

The elderly consume more health resources in both countries. The average per capita health expenditure for those 65 or over is 4.1 times more than that for the 0-64 age group in Japan. As a result, 51 percent of the national health expenditure is consumed by those aged 65 or over (20 percent of the population) and 29 percent by those aged 75 or

over (9 percent of the population).

According to OECD Health Data 2007, Japanese total expenditure on health was 8.0 percent of GDP in 2004. Based on the Japanese national source, public expenditure on health was 6.6 percent of GDP in 2005, and we regard the difference as private expenditure on health in 2005 as shown in Table 5.

For the UK, government spending on the NHS was 7.9 percent of GDP and total expenditure on health was 9.1 percent of GDP in 2006 (Table 5). Therefore, the NHS accounts for 86 percent of all expenditure on healthcare. Government expenditure on the NHS is funded mainly from general taxation, accounting for 80 percent of its funding compared with one-third in Japan. This was supplemented by national insurance contributions (18 percent of the total), plus a small contribution from charges (e. g. for prescriptions and dentistry; **Note 4**). All this expenditure is said to be 'cash-limited': the total is determined in advance by the Treasury in consultation with the Department of Health (DH), which determines allocation of the funds (Talbot-Smith

Table 5 Health expenditure by source of finance as percent of GDP

	(In percent)									
	Japan 2005					UK 2006				
	Tax	Social insurance	Patients' cost-sharing	Private	Total	Tax	Social insurance	Patients' cost-sharing	Private	Total
Public	2.4	3.2	0.9	-	6.6	6.3	1.5	0.1	-	7.9
Private	-	-	-	1.5	1.5	-	-	-	1.3	1.3
Total	2.4	3.2	0.9	1.5	8.0	6.3	1.5	0.1	1.3	9.1

Source: OECD Health Data 2007.
OHE (2008), Compendium of Health Statistics 2008.

and Pollock, 2006). Since 1998 these decisions have been made in the context of a three-yearly public spending 'round', taking place within comprehensive spending reviews of total government expenditure (Talbot-Smith and Pollock, 2006).

Table 6 shows the average length of stay (ALOS) by main diagnostic categories, and Japanese ALOS is 3 to 6 times longer than that of the UK for every cause except musculo-skeletal system. Mental disorders accounted for only 2.1

percent of hospital admissions in 2005 in England, but with a mean length of stay per episode of 46 days, they accounted for 13.7 percent of all bed days (OHE, 2008). The ALOS for inpatient care has decreased to one-fifth since 1960 in the UK, but only by 40 percent in Japan (Table 3). ALOS for all causes except mental illness and learning disabilities was 4.4 days in 2005 in the UK, compared to 45 days in 1951 (OHE, 2008).

Table 6 Average length of stay by main diagnostic categories

Diagnostic categories	(In days)			
	Japan		UK	
	1990	2005	1990	2005
All causes	45	38	19	7
Infectious and parasitic diseases	37	24	8	6
Neoplasms	46	25	10 ^a	8
Mental disorders	326	298	256 ^a	52
Nervous system and sense organs	40	67	13 ^a	12
Circulatory system	81	56	17	10
Respiratory system	30	29	12	7
Digestive system	30	19	8	6
Skin and subcutaneous tissue	28	22	12	7
Musculo-skeletal system	63	38	11	5
Genito-urinary system	31	25	6	5

a: for England; OHE (2007), Compendium of Health Statistics 2007.

Sources: MHLW (2006), Patients Survey. OECD Health Data 2007.

3. Most important financing issues

3.1 Japan: Healthcare system for the elderly and patient-oriented healthcare

Cost containment has been a big issue in the Japanese healthcare reforms since the 1980s, and reforms in the 1990s addressed the pursuit of quality (such as informed consent and patients' choice) as well as cost containment (Fukawa, 2007). The main reform issues in the Japanese healthcare system identified in the 1990s were: 1) reorganization of the health service delivery system; 2) reforms of the medical fees reimbursement system and pharmaceutical pricing system; 3) healthcare financing for the elderly; and 4) quality assurance of health services and empowerment of patients (Fukawa, 2005). There has been more of a focus on the sustainability of the system and patient-oriented healthcare in the 2000s (Fukawa, 2007). In order to increase the sustainability of the system under the aging of the population, it is indispensable to control health expenditure of the elderly and to reduce lifestyle-related diseases.

The fee schedule and the drug standard have been the primary tools used to pursue healthcare reforms in the 1980s and 1990s in Japan. The

medical fees reimbursement system is a crucial tool to provide incentives in the system. Utilization reviews, although on a limited scale, have had an important impact thus far on containing the health expenditure increase in the Japanese fee-for-service system. However, this approach encountered serious limitations in the 1990s and beyond in delivering healthcare services effectively and achieving greater technical efficiency. Case payment to hospital services and the assessment of hospital budgets using the DRG (Diagnosis Related Groups) method are alternative measures to affect the volume of healthcare services. Experimentation with DPC (Diagnosis Procedure Combination) has been in place since 2003.

As the fee-for-service reimbursement system is the primary method used in Japan, it is more difficult to control health expenditure in Japan than in the UK, although Japanese health expenditure is low by international standards. There are over three thousands of sickness funds (or insurers) and financial adjustment among them is an important factor in the Japanese public health insurance system. The Health Service Program for the Elderly, mentioned below, is also one such financial adjustment. Public health insurance is financed through contributions,

government subsidies and patients' payment, but it is extremely difficult to increase the contribution rate. It is also difficult to find resources to increase government subsidies. Therefore, the level of patients' payment has been inevitably increased in recent healthcare reforms in Japan, and there are concerns that the present level of patients' cost-sharing (30 percent) could result in under-utilization of healthcare services among low-income households (Fukawa, 2007). Due to the strong resistance to an increase in burden, the method of such financial adjustment needs to be more rational in order to convince the insured to accept the burden.

In view of a rapidly aging population and heavily age-biased health expenditure spending pattern, the control of health expenditure of the elderly has always been an issue in Japan. Membership in the Health Service Program for the Elderly (HSE) was limited to those aged 75 or over as well as persons with disabilities aged 65-74 (**Note 5**). Under this program, patients' cost-sharing was 10 percent (20 percent for high-income elderly) of the expenditure, although the patients' cost-sharing is capped. Eligibility for the Health Service Program for the Elderly (HSE) gradually increased from 70 to 75 years old in the 2002 reform. In the 2006 reform, it was decided to create a new health insurance for the elderly aged 75 or over beginning in April 2008. Under the new scheme, all elderly, including those who are dependent are required to pay the contributions. The focuses of reforming the healthcare system for the elderly remain as a) coordination between healthcare services and long-term care services and b) elimination of unnecessary long-term hospitalization (Fukawa, 2007). One of the main reasons for introducing long-term care insurance in 2000 was to reduce the number of so-called socially-induced hospitalization cases, especially among elderly patients.

Japanese health insurance in general pays relatively little attention to preventive care. However, the importance of lifestyle-related diseases has finally provided incentives for insurers to focus more on preventive care measures in the 2006 healthcare reform. Prevention is important not only for averting cost-push pressures to health expenditure but also for people's quality of life (Fukawa, 2007). In accordance with higher patient expectations, the measurement and assurance of the quality of healthcare services has become an important policy area. There is little disagreement on the vertical equity in the finance of healthcare in Japan. However, there is much debate about whether allowing a mixed use of listed and non-listed items in the benefit packages will contradict the equitable distribution of healthcare services (**Note 6**).

3.2 The UK: Waiting list and implicit rationing

The main problem in the NHS, and politically the most daunting, is the existence of lengthy waiting lists for elective surgery and other discretionary hospital admissions (**Note 7**). The waiting list problem is one aspect of the rationing issue in government-funded health care systems (Palmer and Theresa Ho, 2008). In Britain in the past what has been described as implicit rationing seems to prevail (Mechanic, 1997). This means that a good deal of discretion is afforded to specialist medical staff to decide which types of patients should be treated, especially when the treatment costs are high (Palmer and Theresa Ho, 2008).

Explicit decisions to stop providing specific treatments are still very much the exception in the NHS and are likely to remain so in the near future (Fattore, 1999). There are at least two main reasons why, to a large degree, it is difficult to expand the areas where explicit rationing decisions are made (Fattore, 1999):

- The first is related to the wide variability of effectiveness and utility among patients. Since explicit rationing tends to set up rules, the risk of denying effective and highly-valued care to individual patients is great.

- The second reason is political: explicit rationing tends to be unpopular because it raises sensitive issues, seriously affects specific population groups, and weakens the reassuring function of the NHS. Implicit rationing of health services has the advantage of transferring the responsibility for crucial resource allocation decisions to the medical staff and possibly avoiding the opprobrium that would otherwise fall on the government if these rationing decisions could be attributed directly to it (Palmer and Theresa Ho, 2008). Implicit rationing may also service the interests of the medical profession in preserving its much valued clinical autonomy. However, implicit rationing is likely to have the consequence of contributing to undesirable variations between regions and individual hospitals in medical practices, and in turn, this may mean that similar age and disease groups may be treated less equitably depending on their geographical location (Palmer and Theresa Ho, 2008).

The recent attempts in the NHS to create more guidelines for clinical practice via the use of evidence-based medicine, clinical trials evaluations and technology assessment may be perceived as a move in the direction of a more explicit rationing process based in part on economic inputs (Palmer and Theresa Ho, 2008). Technological change and rising expectations of the population will increase the demand pressure on healthcare, and if this pressure is substantial then implicit and explicit

rationing decisions will become more common in the future. However, it is unlikely that satisfaction with the NHS will be preserved if hard rationing becomes more explicit. Despite the potential for inequities in the NHS, there can be little doubt that the overall funding characteristics produce a greater degree of equity (Palmer and Theresa Ho, 2008). Since the UK has been successful in containing public and total health expenditures, the main point is how to improve cost-effectiveness and how to manage public support for a system where rationing mechanisms are becoming more evident (Fattore, 1999).

4. Discussions

4.1 The UK experiences

In recent years, in all OECD countries and others, there have been a number of attempts to reform the financing methods of the health services, including the separation of the roles of purchasers and providers of health services to generate a more competitive set of relationships on the supply side, the introduction of casemix funding of hospitals and proposals for changing health insurance arrangements (Palmer and Theresa Ho, 2008). Although the healthcare systems of Japan and the UK vary greatly, the UK experiences offer useful insight for the Japanese healthcare reforms including the following points: (a) technical efficiency of healthcare delivery, (b) casemix financing of hospitals, (c) gate-keeping of patients flow, and (d) design of a public healthcare system with appropriate incentives.

Despite evidence to support overall relative allocative efficiency of the British NHS, in recent years there have been sustained attempts to increase the technical efficiency of service delivery (Palmer and Theresa Ho, 2008):

- The first initiative has been to strengthen 'clinical governance', which has meant the achievement of greater monitoring and managerial control over clinical activities.

- The second initiative has been to promote the establishment of more guidelines concerning clinical practice, including the use of technology, following on the revelation of considerable variations in practice between regions.

A large number of indicators of hospital performance have been devised in the NHS to enable comparison between hospitals.

The casemix financing of hospitals has increased internationally. This trend is based on the view that existing methods of hospital finance, either cost reimbursement or aggregate budgets, were unsatisfactory in providing the appropriate incentives to achieve greater efficiency. It is crucial

for the sustainable development of the healthcare system that all parties concerned are appropriately incentivized, and reform of the reimbursement system is especially important in this regard. The UK introduced a new prospective reimbursement system known as 'payment by results' (PbR). Foundation trusts began implementing the system in April 2004; non-foundation NHS trusts began implementation over a three-year period beginning in April 2005. By 2008 it will cover 90 percent of all hospital services, and ultimately all payments for services within the NHS will be based on the PbR (Talbot-Smith and Pollock, 2006). There exists a national 'tariff' of prices for each of the Healthcare Resource Groups (HRGs), which are standardized categories of clinically similar treatments that consume roughly equal amounts of healthcare resources - similar to, and indeed derived from DRGs (Morris et al., 2007). The national 'tariff' is a list of fixed prices for every service or treatment, aiming to promote competition between providers based on better quality and efficiency, and not simply lower prices (Talbot-Smith and Pollock, 2006). The aim of PbR is to provide a transparent, rules-based system for paying trusts. It will reward efficiency, support patient choice and diversity, and encourage activity for sustainable waiting time reductions (Morris et al., 2007).

There are contradictory pressures at work within Europe, with public systems such as Denmark and England seeking to expand and enhance levels of patient choice of provider and treatment, while social insurance systems such as Germany and France are seeking to restrain traditionally high levels of choice in order to promote cost containment and improve coordination of care (Smith, 2004). There is considerable evidence that the traditionally high degree of patient autonomy regarding choice of provider is an important reason for the high levels of popular satisfaction with the social insurance systems in Germany, France and elsewhere. However, there is equally a recognition of free patient choice can also impose substantial costs on the system (Smith, 2004). Patients' involvement is increasingly necessary to reduce healthcare costs. It is proposed to impose restrictions on patient choice of provider through gate-keeping by primary care physicians and to enhance efficiency of the referral system. In this context, it is worthwhile mentioning that the question still remains as to whether the reliance on salaried service and capitation rather than FFS as the predominant method of doctor remuneration has contributed to the low number of doctors in the UK (Palmer and Theresa Ho, 2008).

Primary care budget-holding coupled with fee-

for-service for hospital consultants allows decisions concerning patients' treatment to be made closer to the patients themselves, and confronts decision makers with the opportunity costs of their decisions (Le Grand, 2003). Although there are many ways of designing public healthcare systems, one that takes proper account of motivation and agency issues is likely to be more successful in creating appropriately motivated professionals, satisfied patients, and ultimately better healthcare than one without (Le Grand, 2003). Publicly-funded healthcare systems that incorporate quasi-market elements such as user choice and provider competition can achieve the ends of healthcare policy, but they must be properly designed so as to meet the conditions for effectiveness (Le Grand, 2007). The opportunities and incentives for cream-skimming should be eliminated, either through not allowing providers to determine their own admission or through properly risk-adjusting the fixed price system (Le Grand, 2007).

4.2 Healthcare reform in Japan

Universal healthcare coverage through a public health insurance scheme with fee-for-service payment is the basic definition of the Japanese system so far (at least until the 1990s), which has contributed to the equitable distribution of health services. Several mechanisms are necessary to make a fee-for-service payment system work, including price-setting, utilization reviews (to control the volume of service), and regulations (to minimize moral hazards tempting both physicians and patients). The Japanese experience has shown so far that fee regulation on virtually any service, combined with utilization review, can control costs even without supplementary measures to limit volume (White, 1995). In the 2000s, the Japanese government is searching for new measures to control the increasing demands for health services. Diseases prevention, especially lifestyle-related diseases, empowerment of patients, providing appropriate incentives in the system, and activating the roles of insurers, are among the key factors in order to advance higher quality and greater efficiency in healthcare systems (Fukawa, 2007). It is still debatable as to what extent the traditional Japanese model (universality concerning healthcare delivery and pricing of the services provided; FFS reimbursement with some utilization review) is limited/effective in controlling healthcare costs, and is useful in preventing moral hazard on both the service-provider side and service-user side.

Health expenditures in Japan and the UK are low compared with other developed countries due to the fact that payments for healthcare services are predominantly controlled by the central

government. People's preference for equality in healthcare services may be stronger in Japan than in the UK, and not only equity but also efficiency and quality care are underlying principles in both countries. However, there is a rather big difference between the two countries in the decision making process, especially the public's involvement in the decision making process of the healthcare system. OECD (2006) pointed out that the key to achieving higher quality and greater efficiency in healthcare is to make greater use of the dynamism of the private sector, in part by allowing companies to manage hospitals. However, the impact of reducing the benefit catalogue of the public health insurance system on equal access to healthcare is not fully revealed, and it has not been proven that greater use of the private sector will lead to higher quality and greater efficiency in healthcare.

Facing a decline in the total population since 2005, financing of the welfare state is a formidable issue in Japan. The existing coupling of financing social health insurance to the wages and salaries has shown weakness, not fully taking the changes in the job market into account. Therefore, new options such as redefining public systems and broadening the financing basis have been reviewed. Against the backdrop of trimming public programs and curtailing fringe benefits by company, the burden tended to be shifted to individuals under the name of self-responsibility. If the degree of financial protection provided by the healthcare system can mainly be assessed by the amount of out-of-pocket expenses for user fees and co-payments as well as for non-covered medical treatment as stated by van Ginneken (2007), Japanese patients' cost sharing of 30 percent (10 percent for the elderly aged 75 or over) is apparently too high. Although it is necessary to empower patients and urge patients to act responsibly in order to achieve higher quality and greater efficiency in the healthcare system, this approach places a greater reliance on increasing patient co-payments and co-insurance in health insurance at the risk of affecting the equity of the healthcare system. Gate-keeping by primary care physicians has been experimented in social insurance systems in order to promote cost containment and improve coordination of care. The UK system is a very good example for Japan to investigate the pros and cons of gate-keeping.

As the population ages, it is a mounting concern to all societies in developed countries how to provide long-term care for the frail elderly. The need for long-term care is quite common among the very old. It is quite remarkable in Japan that the provision of long-term care has shifted from welfare and rationing services to needs-based insurance

benefits. Long-term care services are provided through independent social insurance in Japan, whereas many of them will be provided through the National Health Services in the UK. In what way the financing method affects the development of the system remains to be seen. Concerning a redefinition of the elderly, the Japanese experience provides an interesting example. When the Health Service Program for the Elderly (HSE), which has been seen as a typical example of solidarity in Japan (Note 8), was first introduced in 1983, the eligible age was set at 70 years old. It has been increased gradually to 75 during 2002-2007. A very cautious approach has been taken in introducing a program for the elderly in the Japanese healthcare system, although this is not the case in the public pension area. In reducing the generosity of aging-related programs, a balanced reform is needed: spread the cost of reform equitably across generations; improve the willingness to save for retirement; and consider the impact of reform on low-income households (OECD, 2003).

(Conclusion)

Healthcare services are mainly financed by social insurance in Japan, whereas they are provided as social services in the UK. However, there are many important similarities in the healthcare systems in Japan and the UK in terms of low health expenditure, similar spending patterns according to age, and strong government control of the system. From the point of view of system financing, at minimum the following four points can be drawn from the UK experience: (a) technical efficiency of healthcare delivery, (b) casemix funding of hospitals, (c) gate-keeping of patients flow, and (d) design of public healthcare system with appropriate incentives.

Acknowledgement: The author is grateful for the useful comments and suggestions provided by co-editors of this Journal and anonymous referees.

Notes

(Note 1) The NHS reforms of 1991 led to new accounting methods, resulting in difficulty in distinguishing between the costs of hospital services and community health services (OHE, 2007). The HCHS budget now aggregates expenditure on hospital, community health and various minor services formerly classified under 'other' services, plus the cash limited expenditure of family health and related services (FHS). Only the FHS Pharmaceutical, Dental and Ophthalmic Services were unaffected by these changes.

(Note 2) The proportion of patients' payment in the Japanese health expenditure has been decreased

from 30 percent in 1960 to 11 or 12 percent in the 1980s and 1990s, but it has started to increase to 14 percent in 2005 due to recent healthcare reforms.

(Note 3) The expenditures on hospital and community health services (HCHS) amounted to 73 percent of the NHS in 2003. Moreover, relative to England, per capita spending on the NHS in 2005 was 5.5 percent lower in Wales, 4.4 percent higher in Northern Ireland and 14 percent higher in Scotland (OHE, 2008).

(Note 4) Patients' cost-sharing is only 2 percent of the total NHS expenditure. However, out-of-pocket expenditure on health as a percentage of private expenditure on health is about 56 percent (WHO, 2006). Therefore, the share of patients' payments to the total expenditure on health accounts for 10 percent in the UK.

(Note 5) The Health Service Program for the Elderly was first introduced in 1983 to equalize the burden of healthcare costs of the elderly among various health insurances and to ask elderly patients for reduced cost-sharing. Membership in this plan was limited to those aged 70 or over as well as persons with disabilities aged 65-69. These persons may be in any fund, although they are most likely to be in the National Health Insurance. Patient cost sharing aside, 70 percent of the total cost is covered by all sickness funds, 20 percent by the national government, and 10 percent by local governments. In consideration of the importance of long-term care for the elderly, the proportion borne through public funds was raised in 1992 from 30 percent to 50 percent when the expense is related to long-term care services.

(Note 6) Benefit packages do not allow the mixed use of listed and non-listed items in Japan. For example, whenever advanced technology that is not covered by health insurance is applied, the total costs are treated as ineligible for insurance coverage. This is called the prohibition of mixed use. However, under the high-cost relief scheme, if a patient receives certain high-technology treatments in specially approved medical facilities, the basic part corresponding to the listed conventional health service is covered by the insurance, and the patient should pay the balance.

(Note 7) The percentage of patients who had been waiting for more than 12 months fell sharply from 9 percent in 1992 to under 1 percent by 31 March 1996, but subsequently rose to 5 percent two years later (OHE, 2007). A rush to meet the 2002 financial year, saw a sharp fall again to nearly zero: this level of zero 12-month waits has been maintained since 2003 and greater than six-month waits fell almost to zero in England in 2006 (OHE, 2007).

(Note 8) Solidarity in Japan does not appear to be

strong enough to maintain the HSE, although new program which replaced the HSE in April 2008 is also based on solidarity.

References

- Campbell J. C. (1996). The Egalitarian Health Insurance System. in Ikegami and Campbell (ed.) *Containing Health Care Costs in Japan*, Michigan.
- Fattore G. (1999). Cost containment and health care reforms in the British NHS. in E. Mossialos and J. Le Grand (eds.) *Health Care and Cost Containment in the European Union*. Ashgate.
- Fukawa T. (2005). Some structural issues in the Japanese social security system. *The Japanese Journal of Social Security Policy*, 4 (2), 67-75.
- Fukawa T. (2007). Macro evaluation of the Japanese healthcare system in comparison with Germany. *The Japanese Journal of Social Security Policy*, 6 (1), 31-42.
- Henke K.D. and J. Schreyögg (2005). *Towards sustainable health care systems: Strategies in health insurance schemes in France, Germany, Japan and the Netherlands*. Second edition. International Social Security Association.
- IPSS (2007). *Population Projections for Japan: 2006-2055*.
- Le Grand J. (2003). *Motivation, Agency, and Public Policy of Knight & Knaves, Pawns & Queens*. Oxford University Press.
- Le Grand J. (2007). Quasi-markets in healthcare. in Hills, Le Grand and Piachaud (eds.) *Making Social Policy Work*. The Policy Press.
- Mechanic D. (1997). Muddling through elegantly: finding the proper balance in rationing. *Health Affairs* 16 (5): 83-92.
- MHLW (2007). *National Health Expenditure for FY 2005*.
- Morris S., N. Devlin and D. Parkin (2007). *Economic Analysis in Health Care*. John Wiley & Sons.
- Mossialos E. and A. Dixon (2002). Funding health care: an introduction. in E. Mossialos, A. Dixon, J. Figueras and J. Kutzin (eds.) *Funding health care: options for Europe*. Open University Press.
- OECD (2003). *Policies for an Ageing Society: Recent measures and areas for future reform*, ECO/WKP (2003) 23.
- OECD (2006). *OECD Economic Surveys 2006 Japan*.
- OECD (2007). *OECD Health Data 2007*.
- Office of Health Economics (2007). *Compendium of Health Statistics 2007*.
- Palmer G. R. and M. Theresa Ho (2008). *Health Economics*. Palgrave.
- Saltman R., R. Busse and J. Figueras eds. (2004). *Social health insurance systems in western Europe*. Open University Press.
- Smith P. C. (2004). Health care reforms in Europe and their implications for Japan. *The Japanese Journal of Social Security Policy*, 3 (2), 80-95.
- van Ginneken W. (2007). Extending social security coverage: Concepts, global trends and policy issues. *International Social Security Review*, Vol. 60, 2-3/2007.
- Talbot-Smith A. and A. M. Pollock (2006). *The New NHS: A Guide*. Routledge
- White J. (1995). *Competing Solutions- American Health Care Proposals and International Experience*. Washington, D.C.
- WHO (2006). *National Health Accounts*.
- Tetsuo Fukawa (National Institute of Population and Social Security Research)