Japanese Healthcare Expenditures in a Comparative Context

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Japan's total fertility rate is very low (1.29 in 2003), and Japanese life expectancy is among the highest (78.4 years for males and 85.3 years for females at birth in 2003) in developed countries. Consequently, the population is aging rapidly, which has had a heavy impact on welfare state reform in Japan. In European healthcare reforms, early reforms in the 1980s emphasized cost containment; the characteristic of the 1990s was an attempt to promote efficiency by introducing competition and markets into health care; the focus has switched towards effectiveness in the early years of the new century (Smith, 2004). Japanese health expenditures as a percentage of GDP are low among major developed countries, which might imply the efficiency of the Japanese healthcare system. Following the launch of universal public health insurance cover-age in 1961, the benefit level improved considerably in the 1960s and the 1970s. Cost containment became the main objective of health system reforms in the 1980s, and quality care emerged as among the most important objectives thereof in the 1990s. Moreover, an annual increase of 1 trillion yen or more in national health expenditures has had a significant impact on Japan's national budget.

In this paper, after reviewing characteristics of the Japanese healthcare system, we discuss factors responsible for the relatively low healthcare expenditures in Japan. Such an argument is also discussed in a comparative context as to why the Japanese healthcare system needs structural reform to be more effective, sustainable, and user-friendly.

1. Characteristics of the Japanese healthcare system

Most health services in Japan are provided through the public health insurance system. The entire population has been covered by public health insurance since 1961, although there are different schemes for employees and for the self-employed. These schemes are different in terms of contribution, national subsidies, and benefit levels, but the reimbursement system is the same. Contributions are linked to gross wages without reference to health risk and dependents are co-insured without additional contributions in public health insurance for employees. On the other hand, contributions vary from community to community and are based on both individual income and assets in the National Health Insurance, and the state pays 50 percent of the benefit costs. Freedom of choice concerning one's selection of a physician and hospital is pre-served.

There is a special program for the elderly in Japan, which reduces patient cost-sharing significantly. Therefore, it could be said that risk adjustments are done in Japan according to age. Health insurance for the elderly (age 70+, or 65-69 and disabled) was introduced in 1983 to equalize the burden of health costs for the elderly among various health insurance schemes and to ask elderly patients for reduced cost sharing. Membership in this plan is for those who are aged 70 and over as well as disabled persons aged 65-69. These persons may be in any fund, although they are most likely to be in National Health Insurance. The elderly are heavy user of healthcare services, and the question of how to finance health expenditures for the elderly is among one of the most prevalent issues in recent reforms. A reduction in the improper use of hospital beds, which is generally known in Japan as social hospitalization, is largely related to healthcare services for the elderly.

Most health services are reimbursed on a fee-for-service basis in Japan, and the price of each service is specified in the Medical Fee Schedule, which is revised every two years. There are two Medical Fee Schedules: one for the elderly and the other for non-elderly. They are not set ac-cording to the function of medical facilities. The Medical Fee Schedules play a central role in the Japanese health insurance system, influencing the gamut of activities from economic evaluation of medical technology to delineation of the role of public system. However, the Schedules have become increasingly complex after every revision. The same nationwide fee schedules are applied to both GPs and hospitals in Japan, and both inpatient and outpatient services are provided in Japanese hospitals. Therefore, hospitals can enjoy an economy of scope on the one hand, and there is severe competition in outpatient services between hospitals and GPs on the other hand. In order to correct false incentives in the fee-for-service system, a price-bundling approach has been in use since 1981. Price bundling is applicable monthly for outpatient care and daily for inpatient care on clinical tests, pharmaceuticals, injections, and nursing charges

(inpatient only). Total inpatient per diem is bundled only in special cases such as hospice care and psychiatric care. Therefore, the Japanese reimbursement system is still basically fee-for-service with partial price bundling, mainly for chronic diseases of the elderly.

Table 1. Indices related to healthcare systems in 6 countries

		France	Germany	Japan	Sweden	UK	USA
Total population (in million)	2002	59.5	82.5	127.4	8.9	59.2	288.4
Proportion of 65+ (%)		16.3	17.3	18.4	17.2	15.9	12.3
Total fertility rate (TFR)	2002	1.89	1.31	1.32	1.65	1.64	2.01
Life expectancy at birth (both sexes)	2001/02	79.3	78.5	81.8	79.9	78.1	77.1
Infant mortality per 1,000 live birthes	2002	4.2	4.3	3.0	2.8	5.3	6.8
GDP in 100 billion US dollars	2002	14	20	40	2	16	104
Per capita GDP in 1000 US dollars (PPP)	2002	28	26	27	27	28	36
Health manpower per 1000 population	2002				(2000)		(2001)
Physicians		3.3	3.3	2.0	3.0	2.1	2.4
GP		1.6	1.1	–	0.5	0.6	0.8
Dentists		0.7	0.8	0.7	0.9	0.4	0.5
Pharmacists		1.1	0.6	1.2	0.6	0.5	0.7
Nurses		7.2	9.9	8.2	8.8	9.2	7.9
Number of beds per thousand population	2001/02				(2000)		
Acute care beds		4.0	9.0	–	2.4	3.9	2.9
Long-term care beds		1.4	8.2	–	–	3.5	6.0
				(1999)		(1996)	
Average length of stay in hospitals (day)	2000/01	13.1	11.6	39.8	6.4	9.8	6.7
Per capita per year	2000-02						
acute care beddays		1.1	2.6	–	–	1.2	0.7
doctors' consultations		6.9	7.3	14.5	2.9	4.9	8.9

Sourse：OECD Health Data 2004

One of the characteristics in this Japanese reimbursement system is the inclusion of a post-utilization review. This review is made based on healthcare claims from the medical institutions. If an excess use or improper use of healthcare exists in a claim, then the reimbursement of the cost is reduced by the amount of the excess or improper portion.

Because of the economic incentives involved as well as tradition, the percentage of pharmaceuticals as part of total health expenditures is high in Japan (White, 1995). Japanese doctors not only prescribe drugs but also dispense them. There are certain differences between the discount price doctors pay for drugs and the official price on which the insurance system reimburses doctors for the drugs they prescribe. Therefore, one of the major issues in Japanese health re-form today is how to improve the reimbursement mechanism for pharmaceuticals.

Free access is common in Japan. However, consumers cannot choose their health insurance or sickness fund. Health policy is managed by the central government and both the authority and responsibility are centralized. Concerning patient cost sharing, there is an upper ceiling that began at a relatively low level. However, patient cost sharing has been increased several times as a cost containment measure in Japan as there is no other effective way to influence patients' behavior. Since 2003, patient co-payment for the insured under Health Insurance has been in-creased to 30 percent of the cost. The private sector is important in delivering health services and maintaining public health, but the role of the private sector is relatively minor in terms of health service financing (Fukawa, 1998a).

2. Healthcare Expenditures and Healthcare System Performance

Table 1 shows health-related indices in six countries. In Japan, the number of beds per 1,000 population was very high while the number of physicians was relatively low. As a consequence of the high number of beds, the average length of stay in hospitals was very long. The frequency of doctors' consultation is also quite high in Japan, which will explain the relatively high weight for outpatient care in Japan. In Germany, on the other hand, the number of physicians was high (3.3 per 1,000) and the number of nurses was relatively high.

The provision of medical services in Japan is characterized by not only a relatively small amount of labor input, but also by low-cost labor. In Table 2, a comparison is made with respect to physicians' hourly wages in Japan, the UK and the US. Wages are measured and expressed as Japanese yen. This table shows that US physicians are relatively well paid. These comparisons give us partial evidence of the low cost -structure in Japan and the UK.

Table 2. Wage of Physician in 3 countries

Wage of Physician	wage(yen)	ratio
Japan	6175.33	1.00
U.K.(male)	6175.16	1.00
U.K.(female)	4944.90	0.80
U.S.(Family and Genral Practitioner)	7355.38	1.19
U.S.(Internists, general)	8405.53	1.36
U.S.(Surgeons)	9607.72	1.56

Japan："Basic Survey for Wage Structure", Ministry of Health, Labor and Welfare (2002)
U.K.:"Labour Market New Earnings Survey" Office of National Statistics(2003)
U.S.:"Occupational Employment Statistics survey by occupation" Department of Labor, Bureau of Labor Statistics(2003)

Table 3. Health Expenditure in 6 countries (In %)

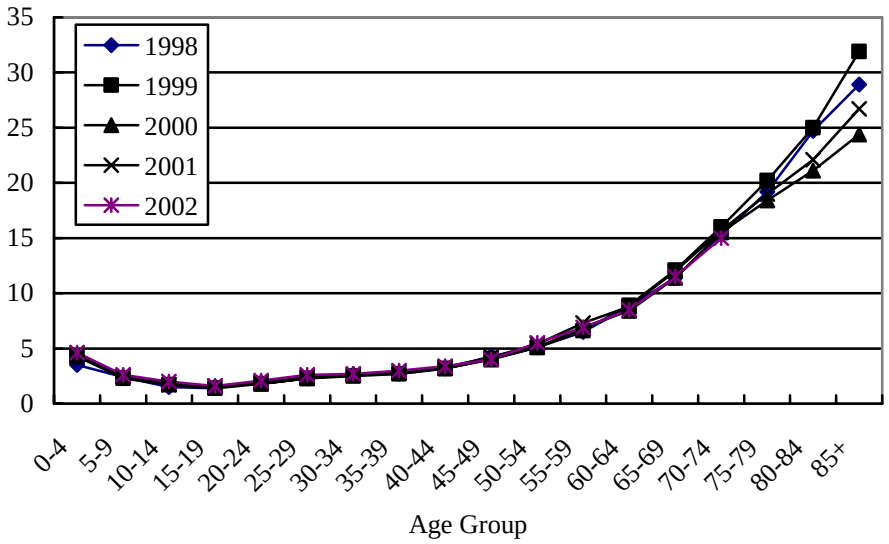
	France 2002	Germany 2002	Japan 2001	Sweden 2002	UK 2002	USA 2002
Proportion of the population covered by the public system	99.9	90.9	100	100	100	25.3
Health Expenditure(HE)/GDP	9.7	10.9	7.8	9.2	7.7	14.6
Public Health Expenditure/GDP	7.4	8.6	6.4	7.9	6.4	6.6
Tax Revenue/HE	2.4	9.9	14.4	…	83.4	31.1
Out-of-pocket payments/GDP	0.95	1.13	1.29	1.55 a	0.83 b	2.05
Out-of-pocket payments/HE	9.8	10.4	16.5	16.9 a	10.8 b	14.0
Pharmaceuticals/GDP	2.0	1.6	1.5	1.2	1.1 c	1.9
Pharmaceuticals/HE	20.8	14.5	18.8	13.1	15.8 c	12.8
Proportion of HE used for 65+	40	33	48	40	37	40
Distribution of HE according to providers						
Hospitals	40.5	30.1	48.5	–	56.4 d	32.0
Nursing, residential care	1.5	7.3	2.9	–	2.7 d	6.8
Ambulatory care	25.3	26.9	27.9	–	15.3 d	32.5

a : 1993, b : 1998, c : 1997, d : 1999
Source：OECD Health Data 2004.

The coverage of the public health programs are 100 percent in four countries (Table 3). The coverage of public insurance is higher in Japan than Germany, but the benefit level of public insurance is higher in Germany (Japan: 87 percent; Germany: 92 percent). Health expenditures as a percentage of GDP are low in Japan and in the UK and high in the US.

Pharmaceutical prescriptions account for 2.0 percent of GDP in France, twice the share of GDP that they held in the UK (1.1 percent). The share of pharmaceutical prescriptions in health expenditures are high in Japan compared to France. With regard to the source of funding for health expenditures, patient out-of-pocket payments are one of the key issues, especially for the elderly, regardless of whether the system is financed mainly by social insurance or by taxes. Health prices relative to economy-wide prices are a ratio of 1.4 in United States, 1.0 in Germany and 0.6 in Japan (OECD, 1995). This explains a significant part of the high per capita expenditures in the United States, and the high pharmaceutical consumption and frequent clinical tests in Japan (Ikegami et.al., 1997).

Figure 1. Per capita Health Expenditure by Age Group as percent of Per capita GDP : Japan, 1998-2002



Source : National Health Expenditure, each year.

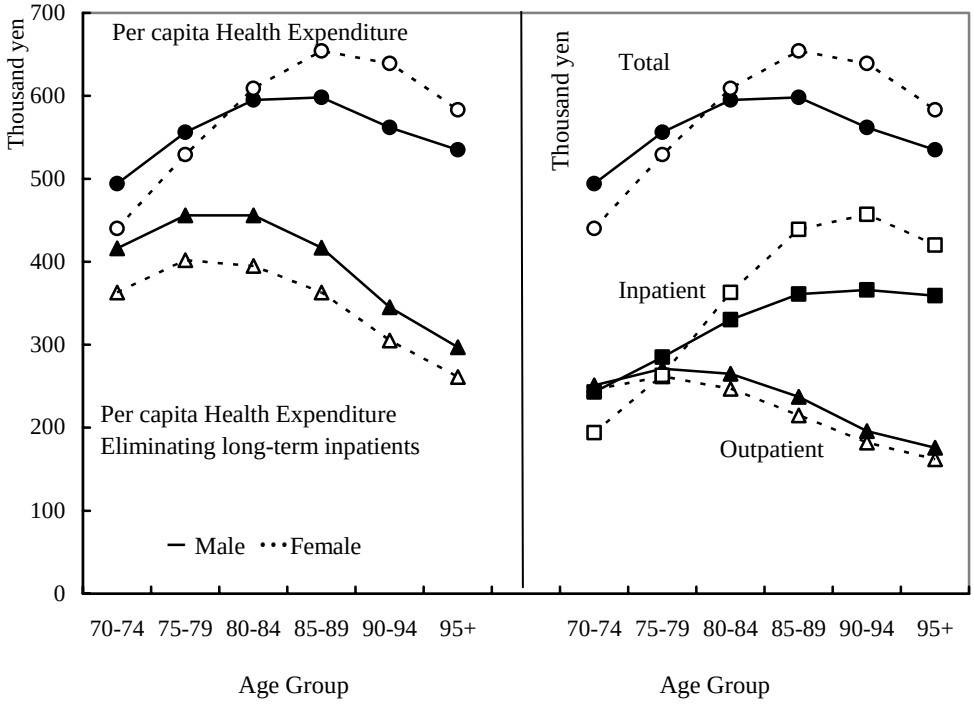
Among European countries, Germany is characterized by: 1) a high density of practicing physicians and a comparatively low number of nursing staff; 2) a comparatively long average length of stay together with a high admission rate; and 3) a high price of pharmaceuticals. By international standards, the length of stay in hospitals in Germany is extraordinarily long, the amount of medicines prescribed by doctors is relatively high, and there are indicators of significant wastage (OECD, 1997b). However, the same problems exist in Japan, indeed, in a more serious manner. Japan is characterized by: 1) a high density of beds and a low density of physicians; 2) an exceptionally long average length of stay (ALS) in hospitals; and 3) a high ratio of pharmaceutical prescriptions (Fukawa, 2000). Public funds play a much larger role in Japan to finance health expenditures, which indicates that sickness funds in Japan have less autonomy.

3. Aging and Healthcare Expenditures

Per capita health expenditures of the Japanese population are quite age-related (Fig. 1). The incidence of long-term inpatients used to be quite high for the elderly, and an especially serious problem was the unnecessary hospitalization of the elderly who no longer needed any health services, which used to be referred to as socially induced hospitalization. Fig. 2 shows per capita health expenditures of the Japanese elderly, using 1992 data. According to this analysis, about 3 to 4 percent of the elderly population stayed in hospitals for 180 days or more within a year (Fukawa, 1998b). If these long-term inpatients were eliminated from healthcare expenditures, the total health expenditures for the elderly would be reduced by 25 percent, and the pattern of per capita health expenditures by age group would change drastically (Fukawa, 1998b). Per capita health expenditures increased according to age until the age group 85-89, after which it decreased. Given that long-term inpatients are more common among females than males and are also more

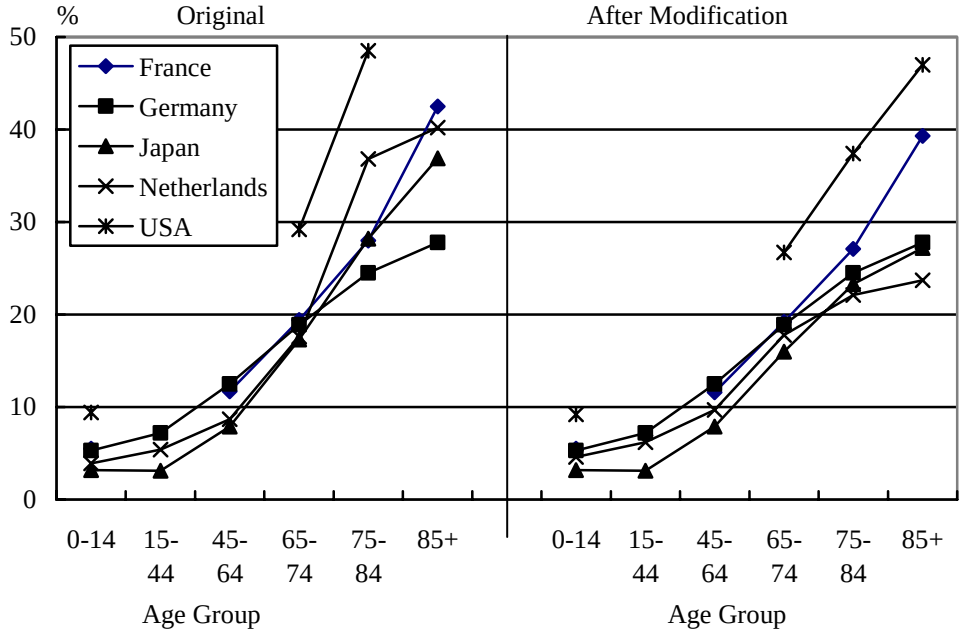
frequently associated with age increases, per capita health expenditures excluding long-term inpatients peaked at around age 80 and the spending pattern for females became identical to that of males (Fig. 2).

Figure 2. Per capita Health Expenditure of the Japanese Elderly : 1992



Source：Fukawa（1998b）.

Figure 3. Per capita Health Expenditure by Age Group as percent of Per capita GDP: International Comparison



Note : Modification means elimination of long-term care part included in Health Expenditure.
Source: Fukawa (2002).

Per capita health expenditures by age group show quite different patterns by country (Fig. 3). In Japan, per capita expenditures for the elderly relative to age group 0-14 were very high.

Consequently, per capita health expenditures for those aged 65+ are about 4.5 times that of those aged 0-64 in Japan, which is a relatively high figure compared to that of Germany and France.

On the other hand, Japanese elderly may be relatively healthier than those in other countries. According to the international elderly survey on subjective healthiness made by the Japanese Cabinet Office, the proportion of those who reported their health to be good or not bad was 92 percent, the highest among five countries (Table 4). This fact may imply that healthcare costs for the elderly are lower in Japan than in other countries. However, low healthcare needs do not necessarily signify an efficient healthcare system because there may be room to reduce excessive healthcare costs. In fact, more Japanese elderly choose hospitals than clinics compared to the other countries (Table 4). This means that Japanese elderly choose capital-intensive medical services more often than those in other countries, probably because they are seeking better services. This is partly supported by the relatively low satisfaction rate among Japanese elderly (Table 4).

Table 4. International comparison of healthcare use of the elderly (In %)

	Japan	U.S.	Korea	Germany	Sweden
Ratio of those who evaluates their health are good	92.1	90.9	71.5	85.2	90.9
Satisfaction with use of healthcare					
completely satisfied or satisfied	90.5	95.1	82.2	93.1	91
completely dissatisfied or dissatisfied	9.4	4	17.4	6.9	9
Ratio of those who choose clinics	30.8	47	53.5	93.4	78.9

Source: Cabinet Office (2000), International Survey on theLife of Elder People.

It is not true that the elderly in Japan have more contact with physicians because they are not healthy. Therefore, there is some room to improve the efficiency of healthcare usages by the elderly. Probably, Japanese elderly need more labor intensive services, such as longer discussions with physicians on their symptoms or diseases. These labor intensive services can be priced higher without implying higher healthcare costs, if some gate-keeping policy for hospital utilization is taken simultaneously. Now, we have no policies of these kinds, hence much attention should be paid to the movement of health expenditures for the elderly in Japan. The above-mentioned spending pattern of per capita health expenditures together with a very rapid aging of the population may jointly impose an undeniable effect on the future healthcare costs for the elderly in Japan.

4. Healthcare Expenditures Viewed from the User Side

The previous section indicates some factors for the "high-cost structure" of healthcare for the elderly hidden in the today's low-cost structure in Japan. The hidden high-cost structure is gradually prevalent. However, there are no means to control such a high-cost structure directly. Cost containment policies in Japan have focused on the reduction of pharmaceutical usages by lowering the reimbursement price. This is a supply-side policy. One demand side policy is to raise the co-payment for pharmaceutical usage. This policy was introduced in Japan in 1997, and per capita outpatient costs actually decreased by 1.7 percent between 1996 and 1998. Hence, healthcare costs can be contained to some extent by raising the price of healthcare. However, this policy was abandoned completely in 1999.

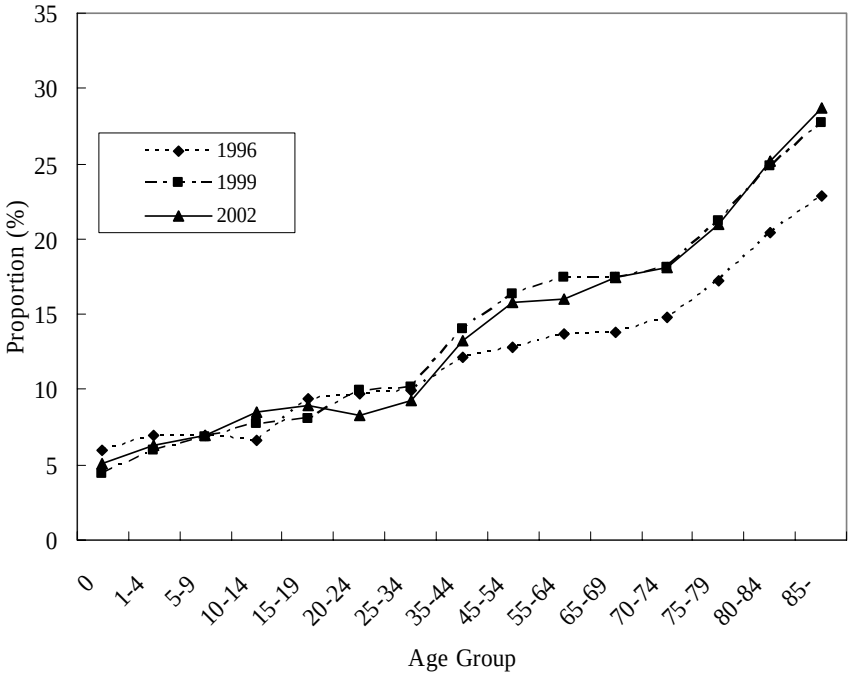
The co-payment policy is used to control outpatient care usages on the one hand, while the introduction of long-term care insurance is expected to correct inpatient care usages on the other hand. The introduction of Long-term Care Insurance (LCI) is expected to increase the number of elderly who can live on their own house if they are well supported by home care services. If the LCI has its expected effect, then we should observe 1) a decrease in the total cost of inpatient care for the elderly, and 2) an increase in the cost of inpatient care per elderly case. This is because relatively severe patients will be treated in hospitals, in accordance with the introduction of the LCI. Actually, total cost of inpatient care for the elderly decreased by 6.5 percent and the cost of inpatient care per elderly cases increased by 4.4 percent between 1999 and 2001.

Table 5. Location of the elderly inpatients who are discharged from hospitals: Japan (In 1,000)

Location after discharged	Before Hospitalization				
	Total	Home	Other Medical Facility	LCI Facility	Others
Total	3.2	1.8	1.1	0.2	0
Home	1.6	1.5	0.1	0	0
Other Medical Facility	0.8	0.1	0.6	0	0
LCI Facility	0.2	0	0.1	0.2	0
Others	0.5	0.2	0.3	0	0

Source: Ministry of Health, labor and Welfare, Patient Survey 2002

Figure 4. Proportion of Dischargable Inpatients by Age Group: Japan



Source: Ministry of Health, labor and Welfare, Patient Survey (2002).

Although the LCI has realized its expected results to some extent, there may be a possibility of further reducing the cost of inpatient care for the elderly. According to the Patients' Survey of 2002, among elderly inpatients aged 65 or over, about 88 percent came from their homes and about 77 percent returned to their homes, compared to 91 and 88 percent respectively for all age groups. This means that the probability of the elderly inpatients returning to their homes is lower by 10 percent than that of all age groups. Table 5 shows how elderly inpatients are moving among hospitals and facilities. About 60 percent of elderly inpatients move from one hospital to another, and only 10 percent are able to return to their own homes. Moreover, about one-fourth of elderly inpatients can be discharged from hospitals if they are able to receive sufficient in-home care services (Fig. 4).

The reasons why dischargeable patients are still in hospitals are: 1) an insufficient supply of in-home care services; 2) a fear of diseases; and 3) the lower co-payment burden in medical care sector. An insufficient supply of in-home care services makes it impossible for dischargeable patients to substitute inpatient care with in-home care services. If the elderly are afraid of their suffering diseases, then they prefer inpatient care to in-home care services. If a stay in the hospital costs the elderly less than in-home care services, then the patients clearly choose inpatient services. Therefore, it is necessary to harmonize the healthcare system and long-term care sys-tem, and to balance the burden for using care in each sector.

5. Discussion

(1) Reasons for low healthcare expenditures in Japan

There are at least six factors that contribute to the relatively low healthcare expenditures in Japan: 1) utilization review; 2) low density of health manpower; 3) low priced labor inputs; 4) price control by the fee schedule and undervaluation of high-cost services in the fee schedule; 5) institutional factors such as the single payer system; and 6) healthier elderly people.

Viewing the elderly collectively, the elderly in Japan seem to be enjoying a healthy life in terms of morbidity. If the elderly in Japan are overall healthier than their German counterparts for example, it is quite natural that health expenditures as a percentage of GDP in Japan are smaller than that of Germany. However, the density of medical and paramedical personnel is much higher in Germany than in Japan, and it could be one of the major reasons for the higher health expenditure in Germany.

Japanese experience has shown so far that fee regulation on virtually any service, combined with a utilization review, can control costs even without supplementary measures to limit volume (White, 1995). Examination of fee claims, through third party examination organizations as well as a check by the insurers, functions to contain the health expenditure increase in the Japanese fee-for-service system. Even though the scale of utilization reviews is limited, the existence of such a review itself has an important impact on the prevention of excessive utilization and fraud in Japan. There are a very large number of beds in Japan. Nevertheless, the Japanese healthcare system operates at a relatively low cost in international terms largely be-cause of the relatively low prices of the resources used (Mooney, 1996). However, this approach faced serious limitations in 1990s, and the Japanese government is currently searching for new measures to affect the volume of health services.

Japanese health insurance is divided into various programs and there are certain inequalities among them in terms of the benefit level, patient's cost sharing, contribution, etc., but everyone is part of the same delivery system, and payments are strictly coordinated. Coverage is quite egalitarian in terms of burdens and benefits through an intricate set of cross-subsidization mechanisms (Campbell, 1996). The fee schedule clearly favors physicians in private practice over hospitals, and fees are especially low for the services that more advanced hospitals provide, such as surgery and intensive care (Hsiao, 1996). Therefore, hospitals compete with clinic doctors by promoting their outpatient care. Clinic doctors and small hospitals counter by trying to gain prestige in the form of high-tech equipment (White, 1995).

There is already some undocumented burden borne by patients, and public health insurance will have to focus more on the basic parts of health services. Therefore, the role of private insurance, which has so far been a marginal one, is expected to grow in Japan. On the other hand, private risk-based health insurance and solidarity-based public insurance coexist in Germany, although the latter is dominant (OECD, 1997b). It is plausible that a single payer system may result in lower healthcare costs.

(2) Needs for efficiency in healthcare expenditure for the elderly

On the other hand, there exists a persistent high-cost structure in inpatient care for the elderly in Japan. How to control healthcare expenditures for the elderly and to finance such a program is an important issue in Japan. It was assumed that a large share of pharmaceuticals for out-patient care and a not negligible number of long term inpatients were two major sources of in-efficiency with respect to healthcare expenditures for the elderly. How long-term care insurance affects and will affect the health expenditures for the elderly is a very interesting question. The quality and efficiency of healthcare expenditures for the elderly will continue to be central is-sues.

A large proportion of healthcare expenditures is accounted for by the elderly in Japan, and the rate is expected to increase in the future. Nevertheless, per capita health expenditures have not continued to increase with age, and it has become clear that the relation between population aging and health expenditures should be viewed carefully. Per capita health expenditures in-crease with age until age group 85-89, but decrease afterwards in Japan. If we can omit the expenditure for long-term inpatients, the age pattern of per capita health expenditures changes drastically, and this has significant importance for the rapid aging of the population in Japan. Annual health expenditures per deceased elderly patient decreased with age in Japan and in the United States. Busse and Schwartz (1997) reported annual inpatient days per deceased person peaked at age group 55-64 and decreased

afterwards with age. We therefore consider that health expenditures per deceased elderly patient for one year (or six months) before death may decrease universally with age regardless of the healthcare system for the elderly.

Many elderly people with chronic conditions need more long-term care services than healthcare services. It is more reasonable for the elderly themselves to decide which services they use, if they have enough knowledge and information about these services. It might be possible to say that Japan can reduce inpatient care for the elderly considerably without deteriorating health outcomes for the elderly. It is clearly inefficient to provide those elderly who need only long-term care services with institutional care at hospitals.

(3) Healthcare reform in Japan

The main reform issues in the Japanese healthcare system are: 1) reorganization of the health service delivery system; 2) reforms of the reimbursement system of medical fees and pharmaceutical pricing system; 3) financing of healthcare for the elderly; and 4) quality assurance of health services and empowerment of patients. A trial for fixed amount payments (a kind of DRG) for acute inpatient care was initiated in 10 hospitals in 1998. The most recent government proposal, made public in September 2001, contains the following items: a) increasing patients' cost sharing to 30 percent of the cost; b) increasing the eligible age for the special program for the elderly from 70 to 75 years; and c) introducing a total budget system to the special program for the elderly. In Japan, in order to correct excessive competition, classification of hospitals according to their functions and streamlining of patient flow have been pursued seriously in since the 1990s (Fukawa, 1998a).

One salient aspect of the Japanese health system is its achievement of low health expenditures through regulated fees (Ikegami and Campbell, 1998). The fee schedule and drug standards have been the main tools for pursuing healthcare reforms in Japan; however, it has become clear that these tools are limited, and other measures are required to improve the quality and efficiency of health services concurrently. Classifying hospitals according to their functions and streamlining patient flow are among the options that are being seriously considered in Japan. Prospective payment has already been partially introduced in health care for the elderly in order to reduce the negative effects of the fee-for-service system.

Japan is trying to correct these false incentives in the fee-for-service system through introducing partial price bundling excluding the physician's fee, but this effort is only at an initial stage and the actual situation is far from a prospective payment such as capitation and HMO. A final goal may be a transformation of the reimbursement system from fee-for-service to payment per case. Concerning health expenditures for the elderly, it is assumed that a large share of pharmaceuticals for outpatient care and a not negligible number of long-term inpatients were two major sources of inefficiency in Japan. How long-term care insurance will affect the health expenditures for the elderly is another very interesting topic in Japan. Efforts to correct false incentives built into the fee-for-service system will continue in Japan. Empowerment of the user is another weakness of the Japanese health system, although it is important for the improvement of the quality of medical services especially from the user's point of view.

The freedom of choice of sickness funds by the insured in Germany since 1996 has stimulated discussions in Japan on how to strengthen the functions of the insurers. In Japan, activities of insurers have been marginal so far, and it is expected to be a tool for a breakthrough in healthcare reform in Japan that will strengthen the functions of the insurers. Case payments to hospital services and assessment of hospital budgets using the DRG-method (Diagnosis Related Groups), both now being implemented in Germany, are being viewed with keen interest in Japan. Partial price bundling is being introduced mainly in elderly healthcare. Case payment has been introduced in Germany and currently corresponds to 20-25 percent of hospital accounts. The share is expected to increase. A research report in Germany has concluded that the introduction of a DRG approach would be effective in standardizing health services and improving the quality of health services, but not very effective in containing health expenditures.

Regional differences in health expenditures are also an important issue in Japan (Gunji, et.al 2001). There remains a significant difference in per capita health expenditure after age adjustment. Health expenditures do not coincide with the length of life expectancy, but there is a strong relationship between health expenditures and capacity for health services. Within a country, if there is a regional difference of two times which cannot be explained

reasonably, healthcare expenditures of the country might be reduced by half without affecting health ser-vice outcomes.

Countries are still experimenting with various approaches to health reform in order to contain health expenditures and to realize more effective uses of health service resources. A central theme applicable to each country is the lack of integration in health service delivery and the weak and sometimes distorted pattern of incentives for efficiency.

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