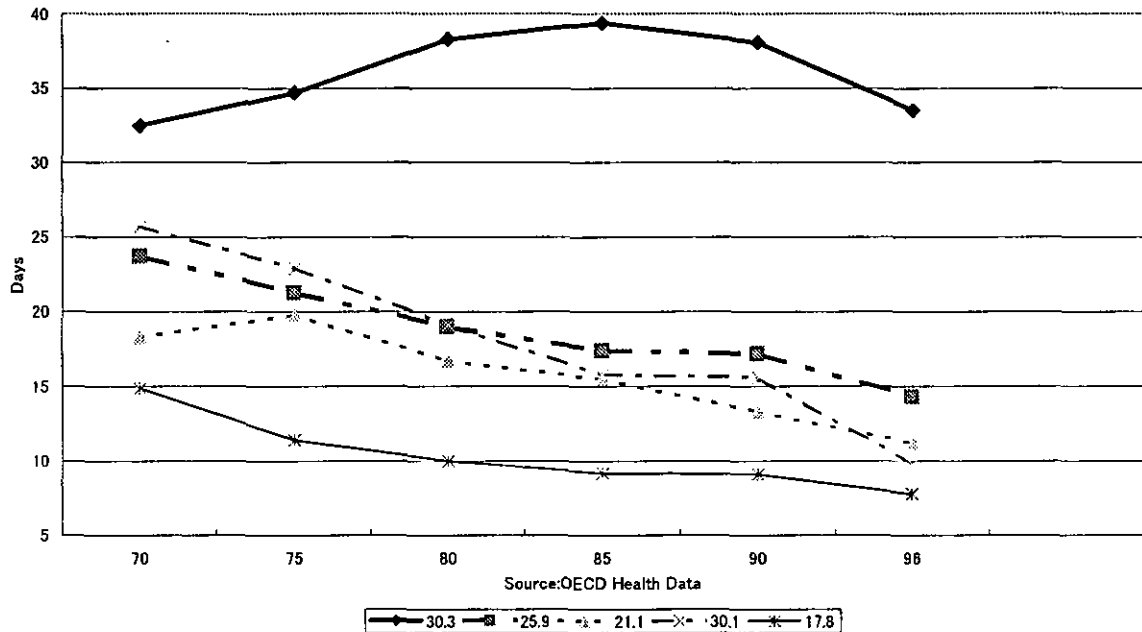


costs for the elderly controlling for terminal medical care costs are not different from those in other age groups (Suzuki and Suzuki 2002). This implies that medical cost increases with aging may well be avoided if appropriate measures are to be taken for terminal care.

--- Third, impacts of an increasing number of the elderly vary across health insurance groups with their different shares. Unlike pension schemes, health insurance plans

Figure 2. Average duration of hospitalization



for employees are established on their company-based, so that workers would move to the local authorities-based insurance plan after their retirement, resulting in the heavy burden on local authorities with the concentration of the higher risk membership. Thus, how to construct the better risk-sharing mechanism across different insurance plans is an important issue in the health reform.

3) Health insurance schemes

Japan's health insurance schemes are complicated reflecting their long-run historical developments. Originally, public servants and employees in large firms (including their family members) are covered by their health insurance plans which are provided by their employers as the fringe benefits. This is followed by the government policy for establishing the "universal" health care system, and the employees in small firms and the self-employed have their health insurance schemes managed by the Ministry of Health and Welfare and the local authorities respectively.

The individual contribution to the health insurance is based on their monthly

earnings (shared equally by the employer) regardless to their risk of diseases unlike the case of private health insurances. The earnings here include wages for the employee and annual incomes for the self-employed. The contribution to the health insurance is more like an income tax targeted to finance the national health insurance. The scheme has an effect to distribute incomes from the poor to the rich, because both contributions to and benefits from the health insurance are closely related with individual incomes².

The difference in the origin of the health insurance schemes has largely affected to their fiscal balances. First, the Society-Managed Health Insurance (SMHI) was established in 1922 consisting of individual company-based insurers. Their fiscal balances have been favorable for many years reflected by growing numbers of the employees at relatively low age as well as abundant contributions of the employers reflecting high rates of economic growth. Second, the Government-Managed Health Insurance (GMHI) was established for the employees in small companies which cannot have their own insured groups. Third, the Citizens' Health Insurances (CHI), which was established in 1938, are regionally organized with cities and towns as insurers. The majority of the membership are self-employed, who generally have less incomes.

A major characteristic of health insurance schemes in Japan is, unlike the case of the public pension insurance, most of the members of the SMHI and the GMHI move to the CHI after their retirement. As the result, the share of the elderly in total membership is 25% in the CHI compared to 3% in the SMHI and 6% in the GMHI. Thus, there are various mechanisms needed to level off per household contributions across health insurance schemes despite the differences of their medical costs arising from the variations of the elderly ratios (Table 1).

--- First, there are subsidies from the general government revenues. The largest subsidies are to CHI accounting for half of the health costs. The rationale behind is that the majority of the membership are the self-employed with relatively low incomes and without employers' contributions³;

--- Second, the transfers of incomes between different insurance plans are made. The

² This is contrasted to the "forced-savings" of the earnings-related pension of which both contributions and benefits are related to the individual's wages.

³ Several comments are needed on this authorities view as follows: one, the self-employed have better chance to manipulate their incomes; two, they are half-employees and half-employers; three, rich self-employed such as doctors are also included in CHI.

Health System for the Elderly (HSE) was introduced in 1973 for pooling the health costs for those who are age 70 and above across various health insurers. The adverse effect arising from the differences in the elderly ratios among insurers is partly compensated by re-distributing the revenues to the HSE⁴. The 70% of the costs of HSE are shared by other insurers based on the rule that they would have paid in benefits if their elderly ratios in insurance plans were the same as the national average. This is the scheme for pooling the fund for the elderly health care costs mainly from the employee health insurance and the government budget. The remaining 20% share of the revenues comes from the national government and 10% from the local government.

--- Third, an additional income re-distribution mechanism through the Retirees' Account in the CHI, which was introduced in 1984. It is to reduce the burden of the CHI which still suffers from an increasing number of those who are age 60-69 shifting from the employee-based health insurance plans. Both the SMHI and GMHI give transfers to CHI in proportion to the population who are retired from the company belonging and join the CHI under age 70:

As a whole, the transfers to CHI from both the SMHI and GMHI have increased with an expansion of the elderly population in CHI, amounting to 4.6 trillion yen for HSE and 1.1 for Retirees' Account in the CHI. The distribution scheme is in a sense a compromise between the two contrasted ideas below: One is to make the HSE entirely independent of other health insurance plans mainly financed by the general government budget, which is similar to the U.S. Medicare system. Another is to keep the elderly in each insured group even after their retirement just like the pension scheme, so that any subsidies between health insurance schemes are necessary.

⁴ This is only for the scheme of distributing health benefits, and the premiums, if any, are imposed on the individuals in their insurers;

Table 1. Health Insurance Schemes in Japan (2000)

	Membershi p	Average age	Average household income	Contributio ns per household (added by employers' contributuoi ns) 1000yen	Medical expenses per individual	Subsidies from the government (billion yen)
Society- Managed Health Government-	3.2million (25.2%)	33.6	3.8million	159(364)	102000	Fixed amount (26.2)
Managed Health Insurance	3.7million (29.3%)	36.9	2.5million	152 (303)	123000	13% of medical expenses (959.2)
Citizens' Health Insurance (CHI)	4.7million (36.5%)	51.3	1.8million	154	164000	50% of medical expenses (3057.7)
Mutual Aid Associations (MAAs)	1.0million (7.9%)	N.A.	N.A.	N.A.	N.A.	N.A.
Others (Sales and Minimum income assistance)	1.3million (1.0%)	N.A.	N.A.	N.A.	N.A.	N.A.

4) Quality of medical services and costs

Even accounting for the favorable demographic composition in the past, and the high level of incomes as well as egalitarian distribution of incomes, it is still difficult to account for the relatively low health expenditures under fee for service system in Japan. According to Ikegami (1999), the comprehensive and mandatory fee schedule is a major factor in Japan's low health spending. That is, usually expensive procedures such as surgery and other capital-intensive treatments are often priced much below the U.S. level. Also, most of the surgeries are conducted in the public sector hospitals with rigid prices, though there are subsidies from the general budget to the public sector hospitals, which are not counted for medical costs⁵. This is contrasted to the prices determined in the market for health service in the U.S.

⁵ There are varieties of the public sector hospitals managed by the local authorities as prefectures and cities, national universities, labor injury insurance, and so on.

A key to understand the relatively low medical costs in the past is the low quality of the services per patient. An internationally comparative indicators relating to the quality of health services show that Japan's medical staff per patient is quite low, and is almost one fifth of that in the United states (Table 2). However, this does not mean that numbers of doctors and nurses are insufficient, as the ratio of the medical staff to the population is just slightly low among major OECD countries. It is simply that the number of hospital beds per population is excessive, reflecting an excessively long duration of hospitalization, which is a major factor for the low intensity of hospital care with insufficient number of medical staffs. Although the average days of hospitalization has been declining, the gap vis-à-vis other major countries has not been narrowed. This is why the reform in health insurance is closely related with the institutions for the nursing care of the elderly as the following.

Table 2. International comparison of indicators relating health care provision (1995-96)

	Hospital beds per 1000 population	Average duration of hospitalization days	Number of medical staff per patient	Number of doctors per 1000 population	Number of nurses per 1000 population
United States	3.37	6.5	5.5	2.59	8.04
Norway	3.29	6.3	4.35	2.79	13.92
Canada	3.62	7.5	2.8	2.13	8.92
Italy	5.13	8.4	3.15	5.37	5.47
France	4.46	5.8	1.52	2.93	5.89
Germany	6.74	11.5	1.88	3.35	9
Japan	10.16	29.2	1.15	1.84	7.38

Source: OECD Health Data

2. Reform of medical system in the 1990s and its effects

As national medical expenditures in Japan increased despite the sluggish economy, its ratio against GDP rose remarkably in the 1990s. Since the revenue decreased reflecting the trend of national income, the finance of the public health has almost collapsed. Hence, the need for controlling the increase of the government-managed medical expenses has been a critical issue of recent.

Japanese government has introduced various policies to control the medical expenses

since the early 1990s. It is difficult to choose the desirable policy mix without examination on the effectiveness of these policies. This paper examines economic effectiveness involved in these policies based on literature research.

The following policies were introduced in the 1990s. One type of the approach is to focus on the side of patients. ① Price policy for demand side, that is, increase of co-payment, ② Setting limits for free access. This includes introduction of family doctor as a gatekeeper function and charging higher fee on the patients without reference from the gatekeepers. The other type of the approach is regarding medical institutions (hospitals and clinics). ③ Introduction of fixed reimbursement system for supply-side instead of fee-for-service system, ④ Capacity control of hospital beds and physicians, ⑤ Restriction of medical services; that is separation of long term care and division of medical treatments and medicines.

(1) What we can learn from experiences of other countries?

Many policies introduced by the Japanese government were the policies that had functioned effectively to a certain degree in other advanced countries. They reconsidered strict regulation policies in the 1980s and shifted to such policies that utilize market function by the use of economic incentives.

Quantitative analysis by the OECD points out that the policies implemented by the advanced countries had both effective and less effective aspects. The effective aspect is that *payment per a patient system, refund system (system that patients pay the total costs when they take medical treatment and are partly paid back as refunds afterward) and gatekeeper system reduces the medical expenses. On the contrary, increase in co-payment rate, strict ceiling of budget, control of increase in doctors and free fee system have little influence on the medical expenditures.*

Reason for the above contradictory analysis can be considered as reflection of reverse relationship between causes and effects that countries with high level of medical expenditure tend to implement the policies to control medical.

As described so far, we can learn from these experiences of the advanced countries to some degree. Yet, we must admit that we should have difficulty if we directly apply specific policies worked effectively in other countries to Japan.

(2) What were the consequences of increase in co-payment rate?

When out-of-pocket is small, moral hazard tends that patients take medical treatment by low level of symptom to be. Accordingly, many countries requires patients certain amounts of co-payment to prevent waste of medical service.

In Japan, co-payment rate of the patients had decreased until the 1970s, and the government changed its policy towards increase in the early 1980s. Below table summarizes historical change of the co-payment rate. The price elasticity of medical demands was one of major topics among health economists and was frequently measured in the 1990s.

Table 1 Co-payment schedule

	Elderly people	Employee Insurance	National Health Insurance
		Principals	Family members
1961	30% or 50%	Fixed price	50%
(Universal public health insurance was achieved)			
1973	Free of charge		30%
			Introduction of Payment Ceiling
1975			Introduction of Payment Ceiling
1981		Introduction of Payment Ceiling	Inpatients 20% Outpatients 30%
1983	Inpatients per day 300Yen Outpatients per month 400 Yen		
1984		10%	
1987	Inpatients per day 400 Yen Outpatients per month 800 Yen		
(Payment rates was raised three times during the period)			
1997		20%	
	Inpatients per day 1,000 Yen Outpatients per visit 500 Yen		
← Introduction of additional contribution on medicines of outpatients →			
1999	Abolition of additional Contribution on medicines of elderly outpatients		
2001	Inpatients 10% Outpatients 10% or 800 Yen per visit		

Price elasticity of medical demand of the elderly

As described in the table, co-payment rate of elderly people has changed as follows.

- ① The co-payment rate shifted from 30% (participants of the National Health Insurance) and 50% (dependents of the Employee Insurance) towards 0% by 1973.
- ② Shift towards fixed price system in 1983 (inpatients pay by fixed price per day, and outpatients pay by fixed price per month).
- ③ In 1997, fixed price system of the outpatients was reformed from per month to per each visit to doctor, and

simultaneously additional contribution was introduced on medicines of outpatients. ④ Fixed rate of 10% was introduced in 2001 (outpatients can choose their payment method from fixed price system or fixed rate system). Analysis at the above occasions is summarized below.

Before medical service for elderly people became free, frequency of use of medical service by the elderly people was twice of that by young age. After the introduction of the free system, medical expenses of the elderly people reached to four times of that of young age. We can see that the free system stimulated the elderly to use medical service. In fact, price elasticity on the rate of medical service measured by aggregated time series data between 1955 and 1979 indicates above -0.3 .

The price increased in 1983 was so small that it did not work effectively for reduction of demand. Some researchers argue that influence of the fixed price system was very small. Other(s) point out that medical demand increased in spite of the price rise by mainly due to increased income. Ookusa (2002) reports low price elasticity of medical expenditures for elderly outpatients and inpatients as -0.016 and -0.051 respectively using micro data. Sawano (2000) analyses price elasticity on rate of outpatients in elderly population ($-0.125 \sim -0.085$) and price elasticity on number of visits per case ($-0.105 \sim -0.085$) using semi-aggregated data.

Tokita et al. (2000) finds that annual per capita medical expenses for people aged 70 years old decreased by around 500 yen, or 3.8 US dollars by effects derived from the price change in 1997. Especially number of medical treatment of chronic outpatients per month decreased 0.33 times

Price elasticity of young age

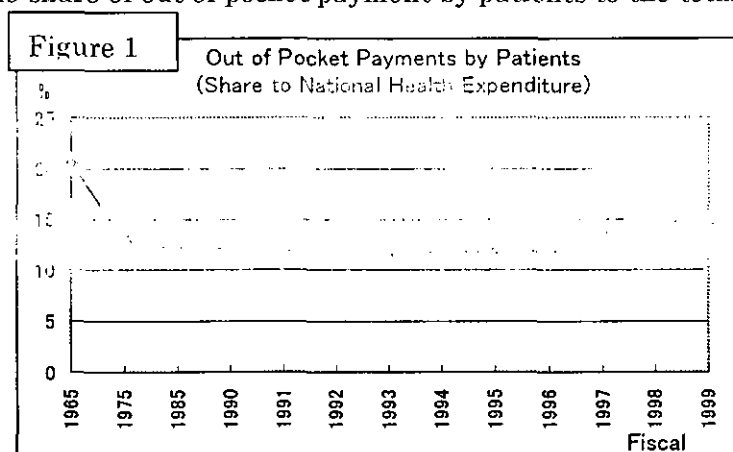
Co-payment schedule differs between the Employee Insurance and the National Health Insurance. The main reforms are; ① Co-payment rate for dependents of the Employee Insurance decreased from 50% towards 30% in 1973, ② Contribution rate of participants of the Employee Insurance increased from 0% towards 10% in 1984, ③ It further increased from 10% towards 20% in 1997, ④ Additional contribution on medicines of outpatients were implemented for both types of the insurance systems in 1997. There are few analyses that focus on the price decrease in 1973 except the analysis by Maeda (1978) which reports that medical expenses per one person increased around 12%.

According to the measurement of Sawano (2001), elasticity on number of the days that an outpatient goes to medical institution is in the range of $-0.044 \sim -0.043$ at the time of the 1984 reform, and is $-0.087 \sim -0.084$ in the 1997 reform. Yamada (1998) reports

that price elasticity on number of episodes of acute outpatients is $-0.09 \sim -0.11$ in 1997. Further Yamada (1998) shows that price elasticity on number of the days of outpatients is $-0.029 \sim -0.124$ in hospitals and $-0.185 \sim -0.325$ in clinic. Ii and Ookusa (2002) focus on light medical service, and conclude that price elasticity of the total areas of the light medical service is relatively high as $-0.123 \sim -0.149$, $-0.23 \sim -0.36$ for flu, and $-0.87 \sim -3.69$ in each area of the light medical service.

The past researches revealed that price elasticity of demand for medical service was very small – the elasticity is about 0.1. There are two remained questions when we consider future trends of medical expenditure. The first is concerning how much the influence will be when fixed rate system is fully introduced for the elderly in 2002 instead of the present fixed price system. The second is regarding the influence of the ceiling of payment. The fixed contribution rate of 10% or 30% is applied to up to the maximum amounts of money set as a ceiling per one month, and the fixed rate of 1% is applied to beyond this maximum point. Although the co-payment schedule has been changed considerably, the share of out-of-pocket payment by patients to the total

national health expenditure was almost constant in the last few decades. We guess that the main reason for the stability is the fixed rate system. But any study has not been reported regarding how the ceiling affects patients' behavior.



(3) Restriction of free-access

One of the characteristics in Japanese medical system is the guarantee for free-access to medical institutions. However, the Japanese government starts to limit the extent of the access as far as the patients' choices are not severely restricted. Increase of co-payment that we discussed in the previous section will restrict the access of low-income group, if the co-payment increase largely. This section examines a referral system and family doctor system. Purpose of the two systems is to prevent waste of valuable medical resource from less useful use of large hospital by patients with light symptoms.

Referral system for large hospitals

When patients take medical treatment by their family doctors, the family doctors introduce them to large hospitals according to the necessity. After the needed

treatments are finished at the large hospital, the patients return to their family doctors. In order to establish this linkage between family doctors and large hospitals, the government introduced the system that patients must pay higher charge, if they access to large hospitals without referrals of their family doctors. The patients are required to pay extra charge in addition to the basic charge for the first consultation, if they directly visit large hospitals with more than 200 beds.

The government also provides incentives for the hospitals that they can get additional fee if more than 30% of their patients are referrals or if they decrease outpatients. Further, the government introduced a reverse referral system, which encourages large hospitals to return the patients to their family doctors.

There are no reports about how the new system changed the behaviours of the patients and medical institutions. However, some researchers argue that the introduction of the referral system facilitates effective use of resources in the large hospitals. The reason for it is that the referred patients tend to use medical resources more intensively than the patients who directly accessed to the large hospitals. On the other hand, other aspects are pointed out that the hospitals are not positive for control of number of outpatients.

Family doctor system

The family doctors are the doctors dealing with primary care to local residents. They are expected to cope with functions such as geographically good access, 24 hours access, dealing with all types of illness and having referral function to special treatments. Patients need referrals from their family doctors to get treatments at large hospitals without additional charges. Statements by the family doctors are necessary for judging the application of the public long-term care. From these situations, we can see that the family doctors are planned to play the role of gatekeepers who check access of patients to high level of medical service and to long-term care.

However, many patients have no family doctors. In addition, the gatekeeper function does not work effectively, as large hospitals tend to accept any patient with referrals regardless of types of doctors who sent the patient. In this situation, the government has implemented a promotion campaign of family doctor system through local government with the cooperation of Association of Doctors since 1993. However, it should be noted that people do not well recognize this system and doctors do not sufficiently understand the system yet. Analysis has not been conducted under the situation because of the immaturity of the system.

(4) Partial introduction of inclusive payment system

As discussed above, even though the out of pocket payments by patients are raised, its influence is limited only on the reduction of patients' visits to doctors due to asymmetry of information in medical service market where it is doctors who have discretions about the amounts of supply of medical services.

In order to control the increase of medical expenses drove by the doctors, the government decrease the medical price through the consecutive revisions of fee-schedule – the price table for fee-for-service refund system in the 1980s. To cope with this, medical institutions prevented decrease of revenue by increasing volume of medicines. This defensive behavior of medical institutions has generated excessive use of medicines and medical examinations.

The government introduced inclusive, or bundled, payment system in order to stop the excessive supply of medical services. In the inclusive payment system, a fixed price is set for a series of medical examinations. That is, one series of the medical examinations are treated as one bundle. Accordingly, the inclusive payment system can limit cost of medical service unlike the fee-for-service system. Concurrently, the medical institutions have incentive for cost reduction. Therefore, we can expect higher level of efficiency in medical service supply under the inclusive payment. Nonetheless, it is concerned that sufficient amounts of medical service may not be maintained.

In the beginning, the inclusive payment was applied to only small parts of the medical services. However, the application areas had gradually spread out in the 1990s. Main inclusive payments were, bundling of blood tests (biochemical examinations) in 1982, hospital fee for the elderly chronic diseases including nursing, examination, dosing and injection in 1990, all-inclusive fee for outpatient of aged chronic diseases and pediatrics in 1996, and inclusion of general examinations and treatments into outpatient consultation fee in 2000.

Except for the bundling of blood tests, most of the inclusive payments introduced so far failed in reducing medical costs according to Kawai and Maruyama (2000) and Ikegami (2001). They point out as the main reason for the failure that the inclusive payment was introduced as an alternative to fee-for-service payment. Under these circumstances, medical institutions choose one of the two payment systems so that they can make more profits. Those institutions whose average fee for a patient had been low chose the relatively high inclusive payment, and the institutions that had treated very sick and costly patients continued to remain in the fee-for-service system. As a result the introduction of the inclusive payment pushed up the medical costs.

Another example of failure was the inclusive fee for outpatients of pediatrics. Since the fixed fee was set per a day, the institution that chose the inclusive system increased the number of the days per a patient.

(5) Controls on supply capacity

Regional differences of health expenditures have strong relationship with medical supply capacity such as density of beds and doctors. The government has been keen on the reduction of excess capacity of medical supply.

The government believes that the larger number of beds equipped per population, the longer the hospitalization prolongs, consequently it started control in 1985. It was to deny the principle of free entrance for doctors to medical market. Making a precise plan for needed number of beds in several hundreds areas, the government prohibited the doctors to open new hospitals or to increase beds in areas where the number of existing beds exceeds the planned number. As a result, we cannot expect the improvement of medical services because competition among hospitals was diminished due to the lack of new entrance of hospitals in the regions that have excess beds.

The government also forecasted that a serious excess of doctors would occur in the future, if the number of medical school graduates was kept by level of the early 1980s. The government asked medical schools to reduce the number of students in 1986 and again requested 10% reduction of students in 1994. However, only 7.7% reduction was achievement by 1996.

If doctors are actually inducing medical demand in Japan, capacity control policy will support reduction of the excess medical expenditures made by the doctors. If the high density of doctors make it easier for patients to access to health services by reducing time costs such as waiting time and transportation time, control of doctor numbers are not preferable. An analysis on aggregated data by region report the small figure of 0.19 as the elasticity of elderly outpatient medical demand on doctors' density. Another analysis using micro-data report that the elasticity of the demand is not statistically different from zero and that the induced demand is not observed in the elderly outpatient medical market.

(6) Limitation of scope of health services

Concentration on acute care

It is well known that average length of hospital stay in Japan is the longer than any other advanced countries. The main reason for this is that hospitals accept chronic

disease patients who need long-term care. Those patients spend huge amounts of expensive health resources. In order to eliminate the wasteful use of the resources, the government has been trying to exclude the patients who stay in hospitals for a long time without serious treatments. One measure of the exclusion is to give hospitals an economic incentive by reducing hospital fee paid per a patient who stays longer than a certain period of time. Another measure is the introduction of public long-term care insurance. These measures are expected to divide patients into two groups, one is that in need of long-term care and another is that in need for acute medical care. The scope of health insurance is restricted to latter group of patients.

Gradual reduction schedule of hospital fee

Stepwise reduction schedule was introduced to consultation fee and nursing fee for hospitalized patients, which are major components of fees that hospitals can obtain from the public insurance, according to the length of stay in the late 1980s. In order to make the downward step steeper, an inclusive payment was introduced in 1998 for the elderly patients who stay in general hospitals for six months or longer.

In 2000, hospital fee system was totally reformed and new "basic fee" for hospitalization was established. The basic fee is differentiated by hospital according to the average length of stay. Under this fee system, hospitals have to discharge patients leaving hospitals earlier in order to shorten the hospital days. Those measures have strong incentives to hospitals to decrease the long-term stays, though the studies have not been made on what have happened to the hospitalization.

Moving the long-term care away from health insurance and to new insurance

To cope with increased number of the elderly chronic patients, the government admitted designated hospitals, which do not meet the required level of health resources, as geriatric hospitals to provide inpatient care for the elder people in the late 1980s as an exception for the qualified hospitals prescribed by the medical law. In 1992 beds for sanatorium are authorized by the medical law as one category of hospital beds for the exclusive use of elderly chronic patients. Furthermore, ordinary beds, whose formal name is "miscellaneous", are classified into two sub groups in the revision of the medical law in 2001. One group is for acute patients and the other for chronic patients.

In 2000, the government started the public long-term care insurance. Under the new insurance the patients can choose the places to stay among the variety of hospitals and clinics as well as nursing homes and institutions for rehabilitation service. In order to meet the new demands, hospitals and clinics are hastily shifting their beds to be qualified by the law of long-term care insurance. As a result we can see a mixture

of patients who are financed by health insurance and those financed by long-term care insurance in the same hospital building.

The government expected 1,980 billion yen would shift from health insurance to long-term insurance in 2000 fiscal year. The Japan Medical Association estimated the actual amount of shift was 1,600 billion yen or 12.7% of medical expenditures for the elderly, a slightly smaller than the government had anticipated.

Division of pharmacy from medical care

Division of pharmacy has introduced for the purpose of prevent hospitals from prescribing excess drugs under the fee-for-service payment system. It also has a merit for patients that pharmacists could check the suitability of the prescription as the second authority after doctors.

Consecutive price cut of pharmaceuticals as well as the spread of inclusive payment made it less attractive for hospitals to have own pharmacy. The less profitable the in-hospital pharmacy became, the larger number of hospitals closed the pharmacy, and the division gradually advanced. However, only 30% of total prescriptions were sent to pharmacy from hospitals and clinics, mainly because the patients have not gained much advantage. Patients do not like to devote a lot of time to visit pharmacies after the consultation at hospitals. Patients dislike the additional cost of "out-of hospital prescription fee" to pay to doctors and "compounding medicine fee" to pharmacists, these costs will raise health expenditures by 5.7% if the division of pharmacy is accomplished.

(7) Comprehensive analyses are needed to assess the consequences of policies

As has been shown above, a variety of policies are implemented in order to control health expenditures by means of the efficient use of resources. The analyses on the policies have been accumulated steadily, though it does not reach a sufficient level. Such studies concerning the equality of provision of health services among the different income groups are especially needed, when the cost of patients becomes heavier with the increase in co-payment rate and patients' free access is going to be limited.

3. Long-term nursing care insurance for the frail elderly

1) Background

The public nursing care insurance was established in April 2000 as a major pillar of measures to improve the system of long-term care for the frail elderly. In Japan, the

share of welfare services in the social security expenditures has been relatively low compared with health insurance costs and public pension. The ratio of welfare costs for the elderly was 9% of the public pension and 34% of the health costs for the elderly in 2000. This is closely related to the general acceptance that family should play a major role in providing elderly care services. Nevertheless, inconsistent policies between health and welfare policies have resulted in an overuse of health resources. Until the year 2000, people needing care and their families have tended to make use of health insurance, which allows unlimited coverage of care costs as actually incurred with no gatekeepers, rather than public welfare, which is hedged around with requirements that must be met in advance. As the result, many people not actually in need of treatment have been hospitalized. This is mainly attributed to a limited supply of long-term care facilities and lack of support for families taking care of the elderly. The insufficient supply of care services compared with medical services comes from their sources of funds, i.e. medical costs are based on insurance premiums directly linked to wages, while public welfare is based on general tax revenues with severe budget constraints.

In the new system of the public care insurance, applicants for nursing care benefits will be assessed to determine the level of care they require. A ceiling will be put on the benefits to be covered by the insurance, and people needing care will be shifted from hospitals to care-providing institutions or their own homes (to receive care there). This would in theory contribute not only to reduce medical costs, but to improve the environment of long-term care compared with a limited living spaces in a hospital.

2) Overview of the nursing care insurance

Financing the cost of the long-term care for the elderly, which used to rely on general revenue, is now funded by premiums, thus changing people's costs and benefits in various ways. Also, it is expected that improved services will lighten the load on families, and reduced treatment costs should make it possible to reduce health insurance premiums. Also, the provision of care services will become more efficient. The introduction of nursing care insurance will also reduce the load on the state and local governments, which so far have borne the entire cost of care from general revenue; under the new system they will foot only half the bill.

Nursing care insurance premiums will be withheld from the health insurance premiums of people 40 years of age and over, and from the public pensions paid to people 65 years of age and over. The average premium level is set to 2900 yen per month per individual. In the case of people whose pension benefits are too low to allow such withholding, premiums will be collected directly from the individuals by municipal governments instead accounting for their economic background. Only

people of age 40 and over are required to pay into the system, on the grounds that young people are unlikely to require care before that age. This is a result of political compromise, but is not consistent with the logic of the long-term care insurance for *lightening the care load on families*. Also, exempting young people is inconsistent with the fact that they have to pay health insurance premiums even though they are at relatively low risk of falling ill.

As we can see from the fact that those eligible for nursing care insurance benefits include everyone age 65 and over and those age 40 and over who require care because of aging-related causes, the grounds for differentiation on the basis of age are shaky. A more clearly logical setup would provide care for anyone 20 or over who requires it, regardless of cause. The fact that this sort of setup has not been adopted seems to reflect one of the flaws of the present segmented welfare system, which puts people with physical disabilities or handicapped into a separate category of welfare.

Still, the nursing care insurance system does aim to separate the provision of services from income level and other socioeconomic considerations and determining the kind and level of services solely on the basis of the condition of the person requiring nursing care. That it allows people to pay additional expenses out of their own pockets to the benefits provided by the insurance, which is prohibited in the health insurance based on uniformity-driven egalitarianism. Also, it marks a major departure from present public welfare, whose major aim is relief for the disadvantaged, and not *ordinary persons in the society*. The nursing care insurance system, based on the premise that long-term care of the elderly is considered to be an extension of daily life, aims to spread the costs through society.

Unlike health insurance, the eligibility for the nursing care insurance has to be certified by the third party, because the care of the elderly is seen as an extension of daily life. The certification was divided into six levels of care; those who need some assistance to live independently, and five levels of seriousness in need for care services. Various problems arose, and certification process came to be regarded as the Achilles' heel of the entire system. Still, eligibility for public welfare benefits so far has also been determined not just by the potential beneficiary's self-determination in the past, but by the application of criteria of some kind in each region; surely transparent unified national criteria.

3) Major issues left

A number of improvements in nursing care payments (the equivalent of treatment payments in health insurance) are under study. One is to set a ceiling on the level of benefits and make flat payments based thereon (unlike health insurance, where

payments are based on a detailed accounting of treatment provided or fee for service). Another is to allow regions and providers some leeway for lowering fees for care services. A third is to enable providers some leeway for adding extra fees, on the grounds that users will find it easier to gauge the quality of care services than of medical treatment. A fourth is to include payment for ancillary services, such as the cost of transporting people needing care and care givers' travel time.

The nursing care payments, which vary by seriousness of individuals, differ substantially between private and public nursing care homes at the same level of seriousness. This is mainly because private nursing homes are treated as a sort of residence, and so-called "hotel costs" are not included in the benefits. This lack of equal fitting has to be eliminated by treating the public care homes as a combination of providing both public housing and care services at the same time, so that appropriate charges are to be taken for housing costs. What is necessary is that those in need of nursing care are able to choose freely from diverse care formats.

Paying benefits in the form of cash to the families of people needing care is admitted under several constraints. This cash payment has been criticized as going against the *principle of spreading the family burden of care through society*. This is based on the argument that women in the Japanese family used to play major care givers, and allowing cash payments may rationalize the situation. However, nursing care insurance benefits should target those needing care, and if they themselves agree it should be acceptable to pay benefits to families providing care services. To avoid families pocketing the cash but not providing care, a unified system including legal controls will need to be put in place.

4. Effects of the Health Reform in 2003

1) Proposed reform

The major content of the health reform implemented in April 2003 to abate the expansion of medical expenditures are the following:

... First, the increase in the patient's co-payments from 20% to 30% uniformly across health insurance schemes, though the rate for age group above seventy years old is set to 10%, and the one for age group below three years old is set to 20%. Also, for the first time, the criterion with respect to income is introduced and the rate for those who are above the middle class income level (6 million yen and above) is set as 20% accounting for 11.3% of the total⁶;

⁶ The co-payment ratio for the elderly before the reform was also 10%, but the quite

--- Second, the insurance premium is raised with widening of the tax base from 8.5% of the monthly wages to 8.2% of annual wages (9.5% of monthly wages). The effect of widening of the tax base is important, as bi-annual bonus accounts for nearly 14% of annual wages on average⁷;

--- Third, the Health System for the Elderly (HSE) is to be applied gradually to those who are age of 75 and above instead of the current age 70 and above, which takes 5 years to be completed. At the same time, the ratio of the subsidy from the general budget is to be raised from the current rate of 30% to 50% at the same pace. The revision has a positive impact on the budget of the SMHI and GMHI whose transfer payments to the HSE would be significantly reduced. On the contrary, the effect on the CHI budget is uncertain, because the reduction of the transfer payments to the HSE is offset by the negative impact from an increasing number of the elderly moving from HSE.

--- Fourth, the reduction of medical fee by 2.7% on average for the first time, of which prices of drugs and doctor's fees are reduced by 1.3% respectively. The fiscal impact is uncertain, because under the fee for service system one would easily recover the doctors' income by increasing the medical service in quantity. This is why the ceiling on medical expenses for the elderly was implemented in the first draft of the reform, though it was removed in the final stage. The original scheme consisted of setting a target growth of medical expenses based on the growth in GDP and elderly population, and the average fee in the following year is to be automatically lowered to attain the previous target level.

2) Fiscal impacts of the proposed medical reform

As the fiscal impacts of these reforms are not clearly shown by the Ministry of Health and Welfare, we estimate the effects based on our own Health Insurance Budget Model which the revised version of Suzuki(2000)⁸ to reflect the recent institutional changes as well as updating of the data. A major feature of the model is the following:

First, the model consists of the five blocs of the Society-Managed Health Insurance

low ceiling on payment was removed after the reform, which means de fact increase of the co-payment ratios.

⁷ This revision is necessary with growing number of part-time workers, and specialists who do not have typical division of monthly wages and bi-annual bonuses.

⁸ A Proposal for Removing Intergenerational Inequity from the Japanese Health Insurance System, J CER Economic Journal, No.40 March 2000

(SMHI), the Government-Managed Health Insurance (GMHI), the Citizens' Health Insurance (CHI), the Retirees' Account of the CHI, and the Elderly Health Scheme (HSE). The data on health expenditures are based on the age-group bracket by five years⁹, so that the changing age compositions in respective groups are reflected in their aggregated fiscal balance. In the first three blocs of SMHI, GMHI and CHI, the total health expenditures are derived from the age composition of the population and the health expenses by respective age groups. Total expenditures in these groups are the sum of the health expenditures and the transfers to the Retirees' Account of the CHI, and the Health System for the Elderly (HSE). The workers' contributions are calculated from the age composition and their wages, which are summed to the other revenues, leading to the total revenues. The fiscal balances in the three groups are shown by the difference between revenues and expenditures. The expenditures and revenues in the Retirees' Account of the CHI, and the Health System for the Elderly (HSE) are estimated by the population by age, and the transfers vis-à-vis the preceding three blocs.

Second, in projecting for the future, the population scenario by the Population and Social Security Institute is used to estimate the population by respective age group based on the assumption of the fixed ratio across each group. The baseline of the National Health Expenditures is set exactly the same as what was projected by the Ministry of Health and Welfare¹⁰. The effect of an increase in the ratio of the patients' payments on medical expenditures is measured based on the elasticity of demand of patients with respect to the price.

The major results are the followings:

First, the baseline case with no institutional changes indicates continuously widening budget deficits toward 2025 mainly by doubling health care expenditures with aging, while the revenues with fixed premiums are not increasing at the same speed¹¹. This trend of widening gap between expenditures and revenues is common to all health insurance schemes; and the aggregate budget deficits are projected to grow from 1.4 trillion yen in 2002 to 16.9 trillion yen in 2025 (Figure 4).

⁹ The Mutual Aid Associations (MAAs) is not included as the data on age groups for are not available.

¹⁰ This is consistent with the sum of the expenditures by health insurance schemes, excluding the Mutual Aid Associations (MAAs) due to unavailability of the data.

¹¹ This projection is consistent with the government projection based on the national health expenditures (30.7 trillion yen) in 2001. The basic assumption of the real economic growth is set to 2% in 2004 and beyond.

Secondly, after these various reforms discussed above are implemented, the aggregated health insurance budget would be improved, particularly in the coming few years. However, the budget deficit would be widening again beyond that, and the aggregate deficit in 2025 would be close to 13 trillion yen, which is relatively lower than the baseline case, but is still significant.

Comparing individual impact of the reform, the largest effect comes from the increases in premiums and co-payments in the immediate future, while the effect of reducing transfers to HIE is growing with time (Figure 5). This is mainly because the major effect of the HSE reform comes from limiting the targeted elderly group from the current age 70 to 75 and increasing the subsidies from the general revenue. This is simply a policy of shifting around the burden between individual health insurance schemes and government, and not an effective measure to constrain the total health expenditures.

On the other hand, the relatively small effect by an increase in patient's co-payments to 30% is not surprising. Higher ratio of co-payment is usually considered to stimulate the cost-consciousness in using medical resources, thereby considered effective in curbing wasteful medical expenses. However, the effectiveness depends upon the content of medical services: the outpatient may well be affected, but not for hospitalized patients who have less alternatives¹². Also, it is partly due to the "safety-net" for patients to avoid an excessive burden by setting a certain ceiling of the co-payments the patients should lower "effective rate" of co-payment¹³. Thus, compared with the current ceiling system, an introduction of deductibles would be better with decreasing ratio of effective co-payment with the medical costs increase.

Third, the effects of the reform on health budgets are asymmetric between the health insurance for employees (SMHI and GMHI) and for the self-employed (CHI). In the former, the fiscal balance will be largely improved until 2010, though falling again beyond that. This is mainly due to decreases in transfer payments to the HSE by raising the age criterion from the current level of 70 to 75 as well as an increase in revenues by expanding the tax base of the premium. On the contrary, the reform would not contribute to the fiscal balance of the CHI, mainly because the positive

¹² This is consistent with the previous experience when the patient's share was raised from 10% to 20% in 1997. There was once for all falling of the medical expenses without any significant changes in the trend growth.

¹³ Though the "safety-net" ceiling of co-payment is to be raised by 10 percent with the increase in co-payments from 20% to 30%, one can reach this ceiling more easily with the higher co-payment ratio, and beyond which there would be no more co-payments