

Cost Sharing among Different Ages/Regions/Occupations in Japanese Social Security Healthcare

Takayama, N. Prof. Dr.
Professor Emeritus at Hitotsubashi University
President of RIPPA, Japan

1 Introduction¹

Cost sharing in Japanese social security healthcare has been growing and its current size is quite massive. It is executed by pooled insurance contributions and statutory transfers from general revenue. Due to dragged-out slowdown of her economy along with a rapid population aging, a resulting persistent budget deficit has forced the central government to severely contain an increasing amount of transfers from general revenue to healthcare. Consequently, cost sharing by pooled contributions, especially by the supportive grants from actively working generations to retired persons, plays an increasing role.

This paper presents cost sharing in Japanese social security healthcare, with highlighting their backgrounds and underlying philosophies. Before going into detailed discussions of them, Section 2 explains the outline of healthcare system in Japan, and points out its several unique features. Section 3 focuses the substantial differences of medical expenses by age. Sections 4 and 5 clarify how to share the medical cost for elderly persons. Section 6 provides a brief outline of the *Kokuho* (国保) scheme organized on a community basis and deals with its cost sharing between rich and poor regions. Section 7 takes up varying insurance contributions among different provinces for the *Kyokai* (協会) scheme of employees in SMEs. Section 8 concludes this paper.

2 Outline of Healthcare Insurance System²

The Japanese insurance system of social security healthcare has the universal coverage. Currently it is broadly composed of the following five schemes, covering different sectors of the population by age and by occupation:

A: the scheme for the “*Old-old*” (those aged 75 and over: 後期高齢者)

B: the schemes for those of age 74 or younger

B1: for regular employees

civil servants (*Kyosai*: 共済)

employees in large firms (*Kumiai*: 組合)

employees in SMEs (*Kyokai*: 協会)

B2: for non-regular employees, self-employed, pensioners, and others (*Kokuho*: 国保)

¹ This paper is a revised and extended version of my report presented at the China-Japan joint workshop on pensions, Beijing, 27 July 2018.

² Ikegami-Campbell (1995), Ikegami et al. (2011), Iwabuchi (2013), Ministry of Health, Labour and Welfare (2013, 2014, 2016, 2017c, 2018a, 2018b) make an overview of the Japanese system.

Individuals have no choice of the schemes. The participation in the first *Old-old* scheme is exceptionally on an individual basis. The schemes for regular employees are based on employment, while the last scheme (*Kokuho*) is organized on a community basis. Dependent persons are covered by respective schemes which their breadwinner participates in.^{3, 4} The first and the last schemes (*Old-old* and *Kokuho*) are financially managed on a provincial basis (都道府県単位).⁵

Poor persons⁶ are exempted from participating in any schemes above mentioned, and their medical costs are wholly covered by public assistance (生活保護: 医療扶助).

There are several unique features in the current Japanese healthcare insurance system. Among others,

1) at retirement, regular employees are usually obliged to move from their schemes (*Kyosai*, *Kumiai*, or *Kyokai*) to the last one (*Kokuho*).⁷ The *Kokuho* has no choice but just mandate the retirees to participate in its scheme;

2) the social security coverage of medical care service and its reimbursement to providers are the same for all the programs;

3) each patient in Japan enjoys free access to any medical service providers at any time, purchasing most available medical treatment at a publicly determined price through social insurance program for healthcare;

4) the copayment (user charges) is basically 30% of medical costs, while special reductions are given to older people of age 70 or over and infants less than 6 years old (Table 1).^{8, 9} Moreover, a very generous ceiling on copayment is implemented, and any amount that exceeds the fixed monthly threshold is to be reimbursed in order to ensure that the financial burden on the patient does not become too heavy. The system is called “Refund of High Medical Expenses (高額療養費制度).” Its standard case for a middle-wage earner¹⁰ is presented in Figure 1;

³ Dependent persons do not directly pay their own insurance contributions. Instead, their breadwinner pays them based on his/her salary (*Kyosai*, *Kumiai*, and *Kyokai*) or on his/her annual income, number of household members, etc. (*Kokuho*). Dependent persons have their own health insurance card individually.

⁴ Dependent persons in China are to be all covered by a community-based scheme. This is a big difference between China and Japan. See Katayama (2018).

⁵ Japan currently has 1724 cities (市町村) and 47 provinces (都道府県) in 2019. Each city belongs to the respective province.

⁶ Their number was 1.7 million; 1.4% of the total population in 2014.

⁷ In China, retired employees remain in the same scheme as before in many cases.

⁸ To be more accurate, prior to the start of compulsory education. The copayment for infants is virtually reduced a great deal or even to a nil, due to special political considerations by almost all municipalities.

⁹ The copayment in China is quite different from that in Japan. Chinese people are asked to first pay 100% of the medical expenses up to the stipulated amount in many cases, and after these deductible expenses, a copayment rate ranging from 3% to 40% is applied. Moreover, there is the upper ceiling above which Chinese patients are again forced to pay 100% of their medical expenses. Each deductible amount and each upper ceiling vary between the inpatient and the outpatient, and the copayment rate depends on the different ratings of hospitals and/or where the hospital is located or whether the hospital is administered by the corresponding local government. These Chinese system looks like a private insurance one.

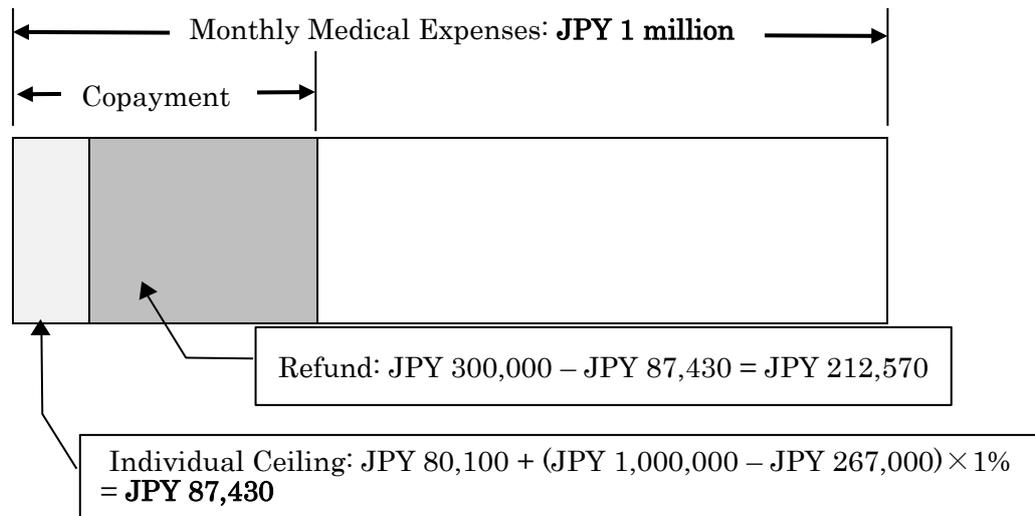
¹⁰ There are five different minimum amounts of copayment above which the reimbursement is available. They are set by respective income classes.

Table 1 Copayment by Age

Age	Copayment (%)
0-5	20
6-69	30
70-74	20 ^a
75+	10 ^a

a: 30% exceptionally for those households with annual income of JPY 5.2 million or higher (for single households, annual income for JPY 3.83 million or higher).

Figure 1 Ceiling on Copayment for Middle-income Earners



Note: Figure 1 takes up a case of JYP 1 million for the amount of monthly medical expenses. The amounts of JPY 80,100 and JPY 267,000 together with the percentage of 1% are all given by the legislation concerned. The middle income is defined as the annual income between JPY 3.7 million and JPY 7.7 million. The exchange rate as at 10 September 2019: RMB1 Yuan = JPY15.1

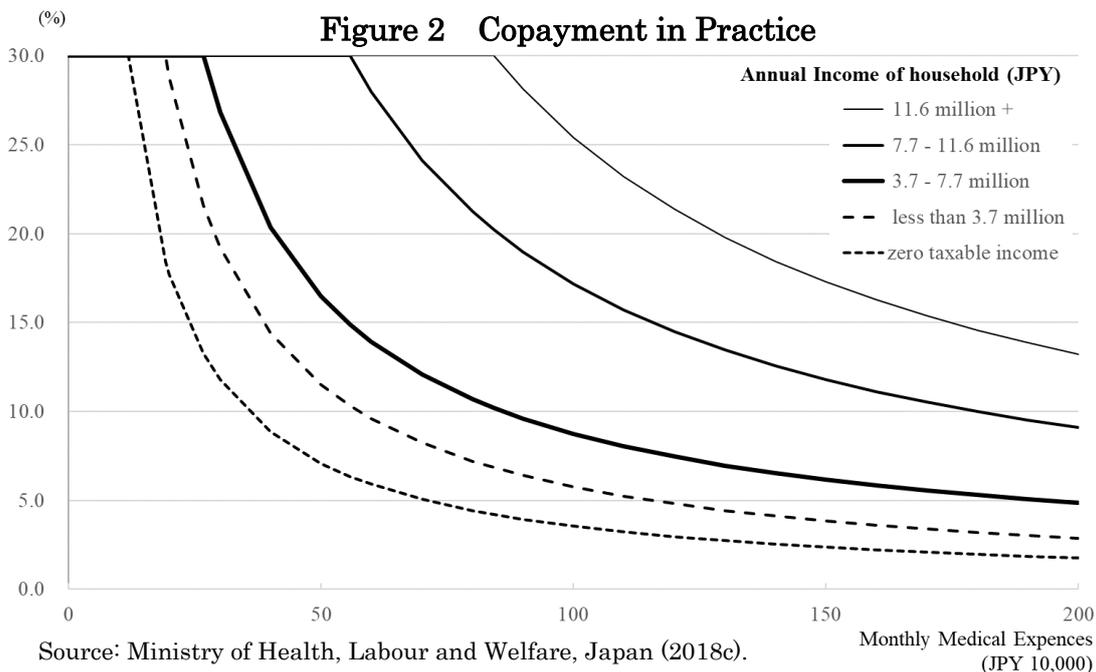


Figure 2 depicts varying institutional percentages of the copayment among different income groups. In fact, the effective copayment rate on the national health expenditure basis was about 11.6% on average in 2015.¹¹

5) in contrast to the benefit side, each program for healthcare adopts a different financing method. Generally speaking, schemes covering low-income persons as their major part receive statutory transfers from general revenue of the central and/or local governments,^{12, 13} and first *Old-old* scheme additionally receive supportive grants from all the other schemes whose major income source is the insurance contribution paid by their enrollees (and their employers).

There are following two principles in paying medical expenses.

- 1) The *Old-old* and *Kokuho* schemes are not responsible for higher average ages of their participants. Differences in average annual medical costs due to different age distribution have thus to be adjusted for equity consideration.
- 2) Persons with the same level of income should pay the same amount of contributions, regardless of regions, provided that the age-adjusted medical costs per person remain same. Differences in the average income level among different regions are another structural factor to be adjusted for achieving horizontal equity.

Reimbursement to healthcare providers is principally based on fee-for-service schedule (出来高払制) that is uniform among different healthcare schemes. The amount of aggregate annual healthcare expenditure in 2016 was 7.8% of GDP, which is relatively low among major old countries.¹⁴ Due to the rapidly aging population, however, it will further increase steadily until around 2040.

3 Substantial Differences of Medical Expenses by Age

Figure 3 gives annual medical expenses per person by age in 2015. It shows that they very much varied among different age groups. For example, they were JPY 159,000 for those less than 15 years old, JPY 120,000 for those between 15 and 44, JPY 285,000 for those 45 and 64, and JPY 742,000 for those 65 and above. For the old-old persons aged 75 and above, they were JPY 929,000, about 7.7 times the expenses of those between 15 and 44 years old.

Elderly people are heavy users of medical care services, and consequently in 2015, 59% of aggregate medical expenses were incurred on the people aged 65 and above,¹⁵ while their share of the total population was 27%.

On the other hand, the average annual income is relatively low for participants in the *Old-old* scheme, as is indicated in Table 2, and thus the *Old-old* scheme can hardly be

¹¹ See MHLW (2018c) for more details.

¹² In addition, schemes without employers' insurance contributions receive statutory transfers from general revenue.

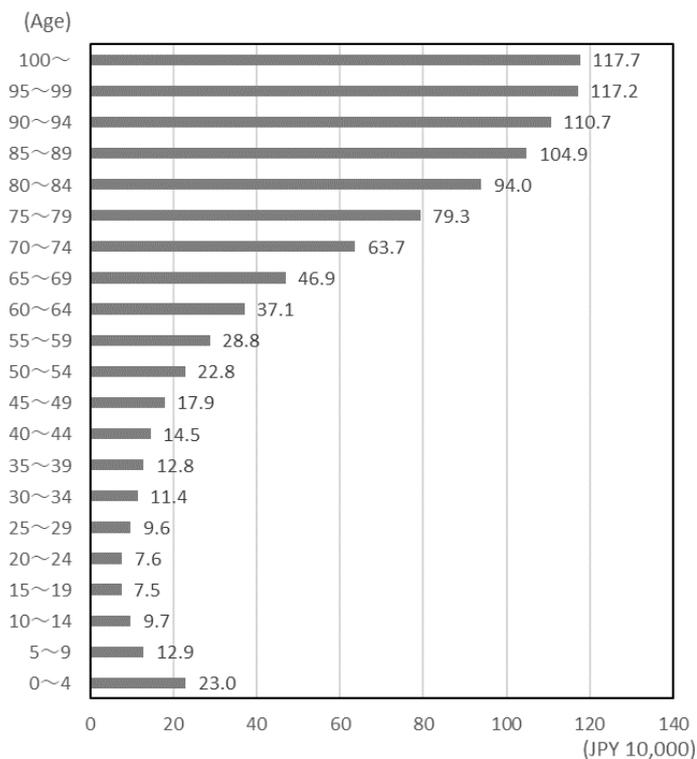
¹³ In 2018, transfers from the central government to social security healthcare totaled up to JPY 11.6 trillion, which was almost the same as the amount to social security pensions (JPY 11.7 trillion).

¹⁴ See Honkawa Data Tribune (2019).

¹⁵ The aggregate amount of medical expenses for the *Old-old* was JPY 15.1 trillion in 2015, amounting to 35.7% of the total expenses. Its share has been steadily increasing.

maintained independently. Some cost sharing is required among different age groups.

Figure 3 Annual Medical Expenses per Person by Age in 2015



Source: Ministry of Health, Labour and Welfare, Japan (2017b)

Table 2 Basic Statistics by Healthcare Scheme in 2015

	Schemes				
	<i>Kyosai</i>	<i>Kumiai</i>	<i>Kyokai</i>	<i>Kokuho</i>	<i>Old-old</i>
No. of participants (1,000)	8,774	29,136	37,165	31,822	16,237
(share, %)	(6.9)	(23.0)	(29.3)	(25.1)	(12.8)
Participation Rate (%) (Age 65-74)	1.5	3.1	6.4	38.7	—
Average Age	33.1	34.6	36.9	51.9	82.3
Annual Medical Expenses per Person (JPY 1,000)	157	154	174	352	952
Average Annual Income (JPY million)	6.37	5.52	3.79	1.4	0.8
Transfer from General Revenue	0%	0%	16.4%	41%	33%
Rate of Insurance Contributions (%)	9.24	9.03	10.0	—	—
Average Annual Contributions (JPY 1,000)	271	221	187.0	139	67
Aggregate Annual Medical Expenses (JPY trillion)	1.37	4.49	6.41	11.46	15.21
Aggregate Annual Copayments (JPY trillion)	0.30	0.98	1.42	1.99	1.19
Aggregate Public Transfers (JPY trillion)	—	—	1.22	4.27	7.04
Aggregate Supportive Grants Paid (JPY trillion)	0.58	1.84	1.98	1.34	▲ 5.85
Aggregate Insurance Contributions Required (JPY trillion)	2.19	6.80	7.29	2.89	1.13

Source: Ministry of Health, Labour and Welfare, Japan (2017b)

Notes: (1) Average annual income for employment-based scheme is calculated by excluding salaries more than the upper limit. Average income and contributions for *Kokuho* are exceptionally on a household basis. (2) Transfers from general revenue includes transfers from local governments, as well. (3) Rates of contributions are combined ones for the employees' portion and their employers' portion. (4) Annual contributions are the employees' portion only for *Kyosai*, *Kumiai* and *Kyokai*. (5) The aggregate supportive grants for *Kokuho* is a net amount subtracting JPY 390 billion (received for the young-old) from JPY 1.73 trillion (paid to *Old-old*).

4 Cost Sharing for the *Old-old* of Age 75 and over

In 1983, a cost sharing scheme was established for the elderly. Several reforms were carried out thereafter, and the latest overhaul was seen in 2008.

4.1 Basic Framework

The main contents of the current *Old-old* scheme are as follows.

The old-old (age 75 and over) pay a lower share of their medical costs; their copayment (患者負担) is basically 10% as described above,¹⁶ and additionally their insurance contributions (保険料) are set only to finance 10% of the remaining aggregate costs (Figure 4).

¹⁶ Their effective copayment rate in practice was 7.8% in 2015. Some experts assert that the basic rate of copayment for them should be lifted up to 20% as that for those of age 70 to 74.

Figure 4 Cost Sharing in the *Old-old* Scheme

Supportive Grants (40%)	Public Transfers (50%)
Contributions (10%)	

Note: Copayments are excluded.

The major part of aggregate medical costs for the *Old-old* are financed by statutory public transfers from general revenue (公費負担; 50%) and the supportive grants (支援金) from all the other schemes of younger groups (40%) as is demonstrated in Figure 4.^{17,18} Public transfers come from both the central government and local governments. Their respective shares are 2:1. Among local governments, provinces and their cities share the transfers equally on an aggregate basis.

The supportive grants are first divided into two parts by the head count ratio between all employment-based schemes and *Kokuho*.¹⁹ Then, among the employment-based schemes, each share is decided to be proportional to respective aggregate amounts of salaries. The ability-to-pay principle is completely applied within the employment-based schemes in sharing the supportive grants. The average income of participants in *Kokuho* are lower than that of participants in any employment-based schemes as is shown in Table 2, however. *Kokuho* is forced to bear heavier burdens by the first per-head principle on cost sharing.²⁰

4.2 Insurance Contributions

Contributions by participants in the *Old-old* scheme are composed of two portions: a flat-rate amount and an income-related portion (which is proportional to income).²¹ Each share on an aggregate basis is *normally* 50:50 where the average income of the old-old in the province concerned equals the national average. Any province with a higher average

¹⁷ To be precise, statutory public transfers are 47%, due to no public transfers to old-old persons who enjoy a higher level of income as actively working employees. Supportive grants are lifted up to 43%, then.

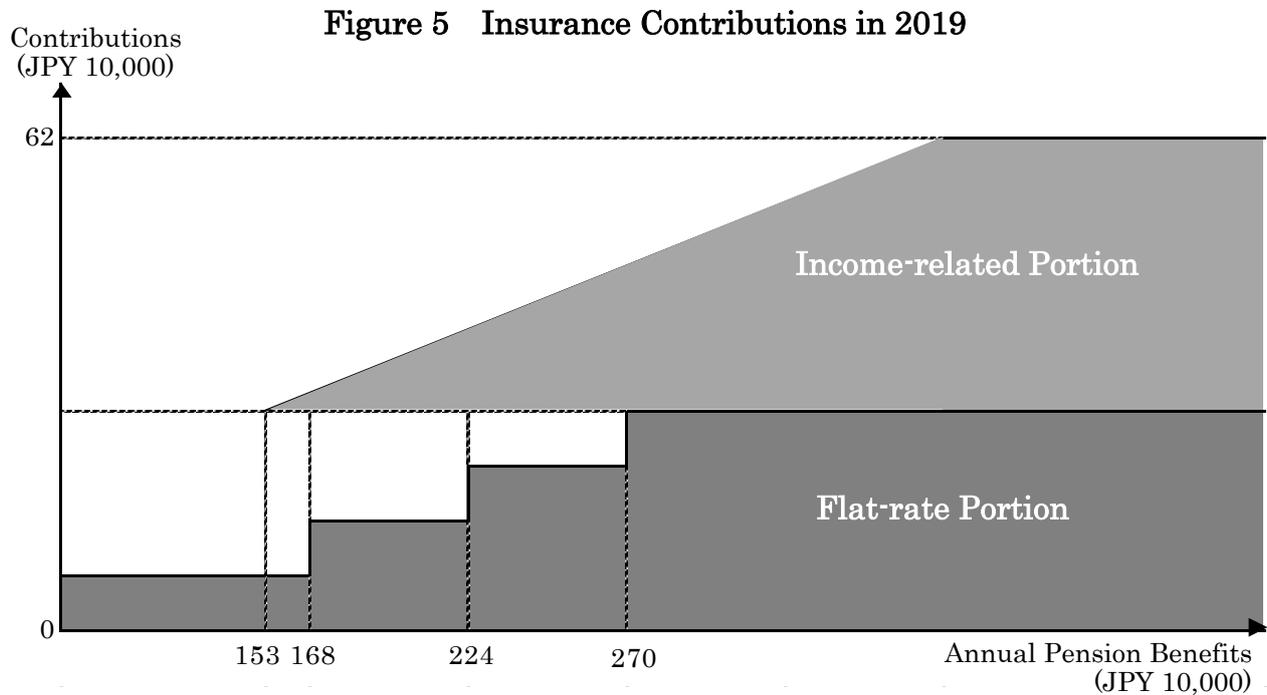
¹⁸ Statutory public transfers are perfect testimony to a government commitment, and a reflection of generous thought to low-income earners. On the other hand, the supportive grants are for reducing the share of insurance contributions. Note further that public transfers are financed not only by income taxes, real-estate taxes, and VAT, but also government debts in current Japan. That is, healthcare costs for the elderly are partly covered by deficit bonds, which is putting off their burden on to *future generations*.

¹⁹ In calculating each head count ratio, the number of dependent persons is taken into account.

²⁰ Moreover, the average income of *Kokuho* participants vary by province. Under the per-head principle, the *Kokuho* groups in poorer provinces are further forced to bear much heavier burdens than those in richer provinces.

²¹ Contributions are individually deducted from social security pension benefits of each participant in the *Old-old* scheme before he/she receives pension benefits.

income has a share of more than 50% for the income-related portion. Elderly persons with lower income are applied to the reduced amount for the flat-rate portion. The reductions are 70%, 50% and 20% depending on the level of income.^{22, 23} Their gap is covered by additional public transfers.²⁴ The upper ceiling has been set up for the annual amount of combined contributions, and the latest annual ceiling is JPY 620,000 in 2019 (Figure 5).²⁵



There remains a considerable gap (1.5 times) among different provinces in annual medical expenditures per person for the *Old-old* even after the difference in the age structure is adjusted, as is presented in Table 3.²⁶ Still more, even when annual medical expenditures per person is same, municipalities with richer participants could levy a lower rate of contributions on each participant. Currently there is no social pooling of *insurance contributions* between rich and poor provinces in the *Old-old* scheme.

²² There remains a transitory reduction of 85% in 2019.

²³ Those persons with reduced contributions are 8.26 million in number, amounting around 52% of the total participants of *Old-old* in 2015. Due to these reductions, the share of the flat-rate portion was pulled down from normal 50% to actual 37% on average, and no province had a share more than 50% for that portion.

²⁴ These reductions (JPY 270 billion in total) together with other factors cut down the share of contributions from 10% (above mentioned) to around 7% in practice in 2015.

²⁵ The annual ceiling is set for persons with the annual amount of pension benefits of JPY 8.64 million or more in 2019.

²⁶ This gap can be used to give great incentives to those provinces with higher medical costs per person for containing them, by imposing higher amounts of contributions and copayment. The gap in the annual flat-rate contribution per person was 1.8 times (JPY 29,700 vs JPY 16,900) between provinces and the gap in the rate of insurance contributions was 1.6 times (11.47% vs 7.15% of taxable income) among them.

**Table 3 Gap of Age-adjusted Annual Medical Expenses per Person by Province in 2015:
The *Old-old* Scheme (Top 3 and Bottom 3)**

Province	Rank	Medical Expenses (JPY million)
Kochi (高知)	1	1.15 (1.23)
Fukuoka (福岡)	2	1.14 (1.22)
Nagasaki (長崎)	3	1.09 (1.17)
National Average		0.93 (1.00)
Aomori (青森)	45	0.80 (0.86)
Iwate (岩手)	46	0.75 (0.81)
Niigata (新潟)	47	0.75 (0.81)

Note: Figures in () indicate each ratio to the national average.

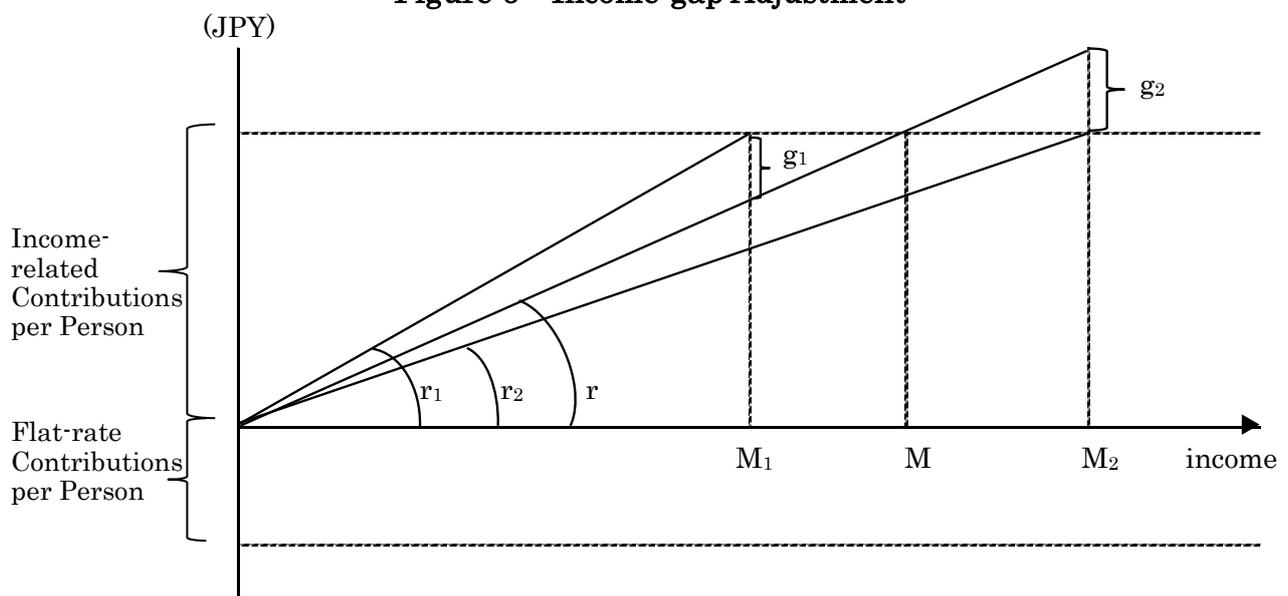
Source: MHLW (2017d)

4.3 Adjusting Income Gap Among Regions

Equal footing can be attained through a following adjustment mechanism, as is illustrated in Figure 6.

Let us consider a two-province case; one is rich and the other is poor in terms of average annual income (M_1 and M_2), where $M_1 < M_2$. Provided that all other things are equal (the amount of age-adjusted annual medical expenses per person, the amount of flat-rate contributions per person, the amount of income-related contributions per person), the rates of income-related contributions (r_1 and r_2) differ between the province 1 and the province 2, where $r_1 > r_2$. That is, the poor province 1 has to levy a heavier burden.

Figure 6 Income-gap Adjustment



Source: Komatsu (2008)

If equal footing is required, then both provinces should have an equal rate of income-related contributions. The equal rate of income-related contributions can be calculated as follows. Let M be the average annual income of the two provinces combined, then r is equal to the average rate of income-related contributions as a whole. We then have g_1 and g_2 as differences of the amounts of income-related contributions per person between before and after required adjustments. If some adjustment fund is set up, and it collects the supportive money (g_2 multiplied by its number of persons P_2) from the rich province 2, while giving subsidies (g_1 multiplied by the number of persons P_1) to the poor province 1, then an income-gap adjustment is completed.²⁷

Japan currently has a different way of equal footing from the example stated above. 7.5% of the aggregate medical expenses (copayment excluded) are currently transferred from general revenue of the central government to each province. This adjusting money is called as the general subsidy (普通調整交付金), which is one component of public transfers given in Figure 4.²⁸ Using this general subsidy, the income-gap among different provinces is partly adjusted.

Its adjustment mechanism is as follows. Let us take three provinces, where their average annual incomes are denoted as M_1 , M_2 , and M_3 . If $M_3 = M$ (the national average), then no adjustment is done, and the original subsidy of 7.5% remains unchanged for the province 3. If $M_1 = 0.8 \times M$, then the poor province 1 can levy 80% of the income-related insurance contributions C_1 (which is calculated as if its average income were equal to M), and the gap is made up for an additional general subsidy. Consequently, the province 1 finally receives the original 7.5% subsidy plus 20% of C_1 as the general subsidy. On the other hand, the province 2 is rich and their income is given as $M_2 = 1.3 \times M$. Then, the province 2 is asked to levy 130% of C_2 (calculated as if its average income were equal to M), and its general subsidy is reduced in turn. The province 2 finally receives the original 7.5% subsidy minus 30% of C_2 as the general subsidy.

Currently all provinces receive more or less the general subsidy from the central government, and only a part of the general subsidy is used to adjust income gaps between rich and poor provinces.

5 Cost Sharing for the Young-old of Age 65-74

As for those elderly of age 65-74 (前期高齢者), around 80% of them currently participate in *Kokuho*. The majority of them are retired persons who moved from employment-based programs. The amount of medical costs per person for this age-group is relatively expensive, as is shown in Figure 3 (p.4). If no scheme of cost sharing for

²⁷ In this case, $g_1 \times P_1$ is not always equal to $g_2 \times P_2$. Consequently, the adjustment fund has to hold its own reserves or to receive transfers from general revenue.

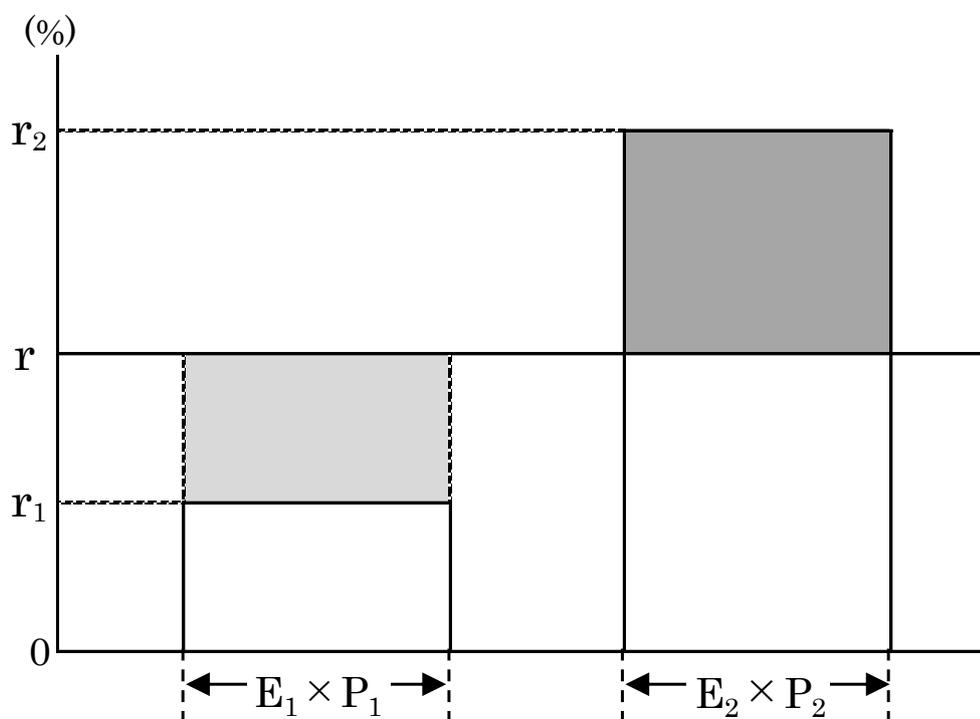
²⁸ There is another subsidy from the central government, called “the special subsidy (特別調整交付金).” It is for helping provinces suffering from natural disasters and other specific difficulties, and currently is 0.83% of the aggregate medical expenses (copayment excluded). The other components of public transfers are all proportional to the medical expenses.

them had been implemented, then *Kokuho* would have faced serious financial difficulties.

The special cost sharing method was invented in 1984, and its latest revision was done in 2008. The current method is depicted in Figure 7. The basic idea is that each healthcare scheme has to share the medical expenses as if its participation rate²⁹ of the young-old is equal to the national average. Let us denote each participation rate by r_i , where $r_1 < r_2$, and r is its national average. Further let us denote each amount of annual medical expenses per person for the young-old and each number of participants of age less than 75 by E_i and P_i respectively. Then the amount of grants paid in the cost sharing scheme is given by $E_1 \times P_1 \times (r - r_1)$, whereas the amount of grants received is given by $E_2 \times P_2 \times (r_2 - r)$.³⁰

Through this kind of the cost-sharing arrangement, *Kokuho* receives a massive amount of grants from all the employment-based schemes. Table 4 presents cost sharing for the young-old in practice in 2018. It shows that *Kokuho* received the grant amounting annually to JPY 3.6 trillion. It was a little more than its aggregate amount of insurance contributions, equivalent to around one fourth of its total revenue. In other words, cost sharing for the young-old operates as another method of income transfer from actively-working younger persons to retired older ones, though Japan has no independent healthcare scheme for them.

Figure 7 Cost Sharing for the Young-old



²⁹ The participation rate for each scheme is defined as the number of participants of age 65-74 divided by the total number of participants of age less than 75.

³⁰ Using E_i as a base for cost sharing may have no incentives to containing higher medical expenses of *Kokuho*.

Table 4 Grants Paid and Received for the Young-old in 2018

Scheme	Annual Amount (JPY trillion)
<i>Kyosai</i> (共済)	0.5 (paid)
<i>Kumiai</i> (組合)	1.5 (paid)
<i>Kyokai</i> (協会)	1.5 (paid)
<i>Kokuho</i> (国保)	3.6 (received)

Note: Figures are based on the budget for fiscal Year 2018.

Through cost sharing in the *Old-old* scheme and a special arrangement for the young-old above explained, social security programs for healthcare are becoming very similar to those for pensions, in that the basic feature of the program is income redistribution from younger and middle-aged to older people.

6 Cost Sharing in the *Kokuho* Scheme

6.1 Overview of *Kokuho*

Kokuho dates back to 1961 when all the remaining others than participants in the employment-based healthcare insurance programs were *mandated* to enroll in the community (city)-based program. It includes self-employed persons, farmers, independent workers, non-regular employees, the unemployed, and retired persons.³¹ Their average age is relatively high, and thus their average medical cost per person is relatively high, as well. Still more, their average level of income is relatively low. Incidentally a little less than 30% of *Kokuho* households had no *taxable* income in 2015 (see Table 5).

Table 5 Income Distribution of the *Kokuho* Households in 2015

Annual Taxable Income (JPY 10,000)	Household Share (%)
0	28.4
1~99	28.2
100~199	22.9
200+	20.5
Total	100.0

Average Income: JPY 1.40 million

Number of persons per household: 1.66

Note: Annual taxable income is calculated by deducting JPY 330,000 from annual earnings. Here, annual earnings are obtained by subtracting business expenses from its returns, or by subtracting the statutory deduction from public pension benefits.

Source: MHLW, *The 2015 Facts and Figures of Kokuho* (国民健康保険実態調査)

³¹ The major part of the *Kokuho* participants has changed dramatically for the past 50 years. In 1965, farmers and the self-employed people were 68% in number, while in 2015 its share dropped to 17%. In turn, non-regular employees and persons with no occupation (including pensioners) were 34% and 44% respectively in number in 2015.

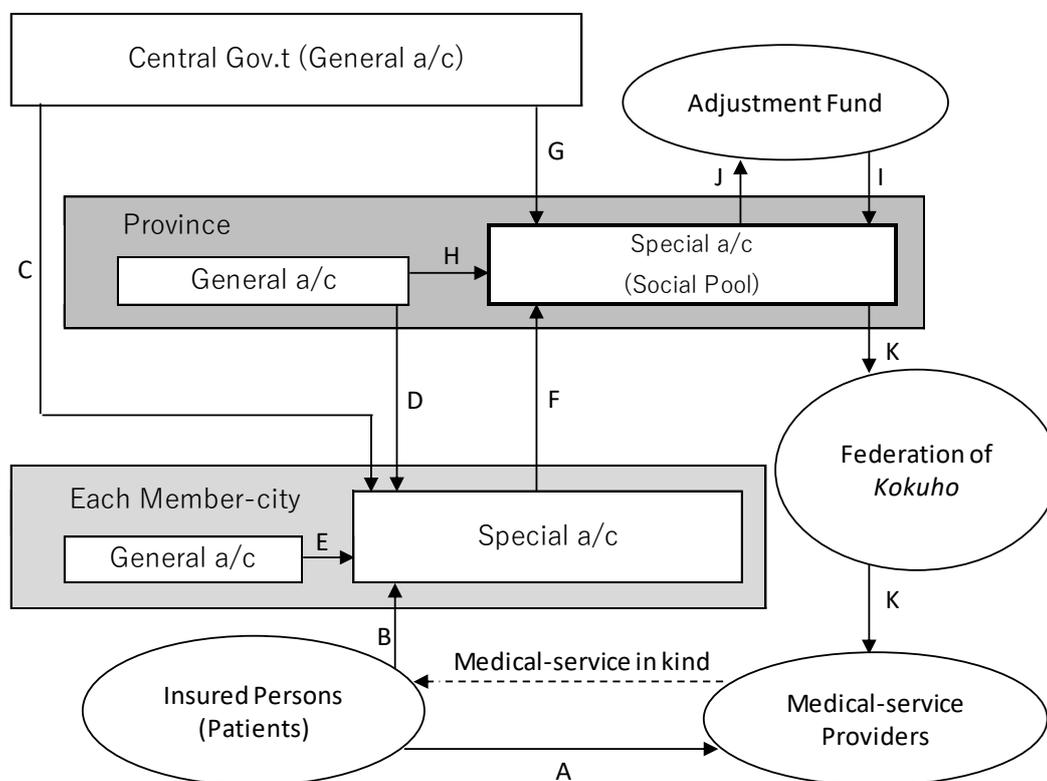
The insurer of *Kokuho* is each city. In 2015, the small-size *Kokuho* insurers of less than 3,000 participants were 471 in number, one fourth of the total (1716). Their fragmented financial condition was quite unstable. Furthermore, even within each province, there were considerably huge gaps among their cities in the annual medical expenses per person (the maximum 2.6 times within Hokkaido province), the average level of annual income (the maximum 22.4 times within Hokkaido province), and the average amount of insurance contributions (the maximum 3.6 times within Nagano province).

In 2018, a new cost sharing scheme within each province launched. That is, the main body for *Kokuho* financial managements of healthcare services moved from cities to their province. Each province is responsible to pay all the medical expenses to medical-service providers, while it collects the required money (国保事業費納付金) from its member cities. Each amount of the required money is decided by the province and is levied on its member cities.

6.2 Money Flow of *Kokuho*

The chart of current money flow is demonstrated in Figure 8. Insured persons of *Kokuho* receive medical services in kind from medical-service providers by directly paying the copayment A (患者負担分) to them.³²

Figure 8 Money Flow of *Kokuho*



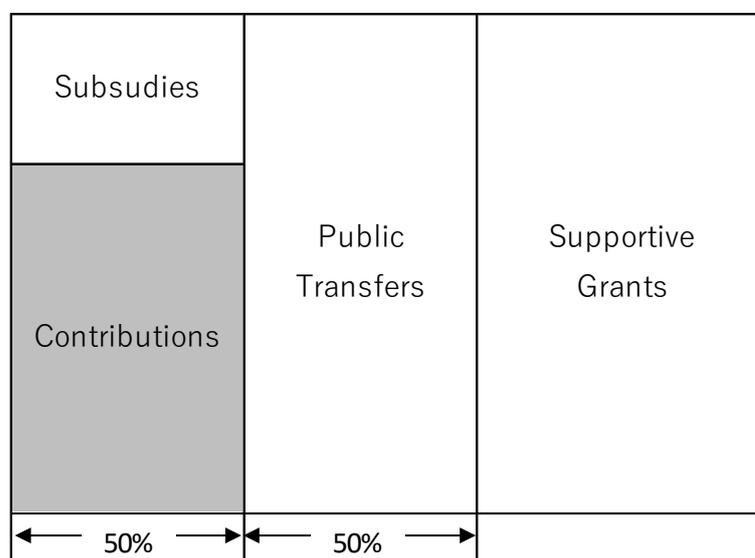
³² Participants can receive cash payments, as well, such as the refund of high medical expenses (高額療養費), lump-sum allowance for childbirth/child-nursing (出産育児一時金) and others. These cash payment is not illustrated in Figure 8.

The copayment by patients is basically 30% of the total medical cost. However, a reduction applies to the specified age-groups, and there is an upper limit in copayments. Consequently, the effective copayment rate was 17.3% of the aggregate medical expenses in 2015.

Medical-service providers send the bills of the remaining medical cost to the Federation of *Kokuho* (国保連合会)³³ and receive the reimbursements K after the professional checks and approvals from the Federation of *Kokuho*.

As is explained above, the current main body for *Kokuho* financial managements is each province where its special account (特別会計) for *Kokuho* works as a social pool for paying the reimbursements K to medical-service providers through the Federation of *Kokuho*, and for paying the supportive grants J to the *Old-old* scheme through the Adjustment Fund (支払基金).

Figure 9 Cost Sharing in the *Kokuho* Scheme



Note: Copayments are excluded.

Figure 9 demonstrates the financial sources of the special account for *Kokuho* at the province level together with their respective shares. Its major source is the supportive grants (前期高齢者交付金) for the Young-old of age 65 to 74 which come from the employment-based healthcare schemes (I in Figure 8), as is already described in Section 5 in this paper. The *remaining* sources are public transfers, subsidies³⁴ and insurance contributions, and the share of public transfers is statutorily set to equal 50% of those sources.

Public transfers are made up of the following 4 components.

- 1) The basic transfer from the central government (定率国庫負担). It was initially 20% of the aggregate medical expenses. It was once increased up to 40% of the aggregate expenses (copayments excluded). But, due to embarrassed state

³³ The federation of *Kokuho* is set up on a province basis.

³⁴ Subsidies are mainly for reducing the share of insurance contributions.

finances, together with a new introduction of transfers from local governments, it was decreased step by step to 32% of them (both copayments and supportive grants excluded) from 2012 on.

- 2) The general grant from the central government for partly adjusting the income-gap among different provinces (普通調整交付金). Its standard rate is 7% of the aggregate medical expenses (two components excluded, as mentioned above). Rich provinces receive less than 7% of them, whereas poor provinces do more than 7%.
- 3) The special grant from the central government (特別調整交付金) for helping provinces/cities which suffer from natural disasters and other specific difficulties. As a whole, it is 2% of the aggregate medical expenses of *Kokuho* (two components excluded, as mentioned above).
- 4) The grant from its own province (都道府県繰入金). Its share is 9% of the aggregate medical expenses (two components excluded, as mentioned above).

The first 3 components are shown as G in Figure 8, while the 4th component is denoted as H in the same Figure.

Regarding subsidies, *Kokuho* receives following 5 kinds of them.

- 5) The compensating grants for reduced contributions (保険料軽減分) toward low income persons. 75% of them are subsidized by the province and the remaining 25% by the city. They are shown as D and E in Figure 8.
- 6) The subsidizing grants for paying high medical expenses above JPY 800,000 per month per person (高額医療費負担金).³⁵ The central government and the province share each 25% of them, and the remaining part (50%) is paid by insurance contributions. The grants are included in G and H shown in Figure 8.³⁶
- 7) The subsidy for supporting insurers of *Kokuho* (保険者支援分), which corresponds to the varying number of low income persons. The central government shares 50% of its subsidy (shown as C in Figure 8), while the remaining 50% is shared half and half by the province and the city (both included in D and E respectively in Figure 8).
- 8) The stabilization grant (財政安定化支援分) from the central government for helping to level off the average amount of contributions among different cities.³⁷ This grant is included in C in Figure 8.

³⁵ There is an additional subsidy for paying much higher medical expenses more than JPY 4.2 million per month per person. This subsidy comes from the central government.

³⁶ China has a unique system for managing high medical expenses in the community-based scheme. It is a joint venture of the community and private insurance companies.

³⁷ There is an additional money transfer, though not legislated by statute, coming from many cities (which is included in E in Figure 8). This transfer is to make up for the deficit of the special account of *Kokuho* at the city level, arising mainly from hesitating to levy higher insurance contributions and/or a lower collection rate of contributions. The aggregate annual amount of this transfer was JPY 300 billion in 2015, which decreased the amount of contributions from JPY 3.0 trillion to JPY 2.7 trillion.

- 9) The subsidy (保険者努力支援分) from the central government for encouraging local governments to make medical expenses more reasonable and to promote a healthier life there. This subsidy is included in G in Figure 8.

Owing to the implemented massive amounts of supportive grants, public transfers and subsidies, the share of the insurance contributions is reduced to 24% of the aggregate annual medical expenditures (copayments excluded), as is shown in Table 6. Nevertheless, burdens of insurance contributions in *Kokuho* are still heavier than those in the employment-based schemes.³⁸

Table 6 Financial Sources of *Kokuho* in the 2019 Annual Budget

Source	Amounts (JPY trillion)	Share (%)
Supportive Grants (前期高齢者交付金)	3.49	31.8
Basic Transfer (定率国庫負担)	2.29	20.8
General Grant (普通調整交付金)	0.64	5.8
Special Grant (特別調整交付金)	0.18	1.6
Grant from Province (都道府県繰入金)	0.64	5.8
Grant for Reduced Contributions (保険料軽減)	0.44	4.0
Subsidy for High Expenses (高額医療費負担金)	0.19	1.7
Subsidy for Supporting Insurers (保険者支援)	0.26	2.4
Stabilization Grant (財政安定化支援)	0.10	0.9
Subsidy for Encouraging Insurers (保険者努力支援)	0.09	0.8
Insurance Contributions (保険料)	2.67	24.3
Total (総計)	10.99	100.0

Note: Copayments are excluded.

6.3 Allocation of the Required Money: Cost Sharing among Regions

The aggregate amount of required money for each province (国保事業費納付金) is given by deducting supportive grants for the Young-old, public transfers and subsidies from the aggregate amount of annual medical expenses (copayments excluded), and by adding the supportive grant to the *Old-old* scheme. This amount is allocated into its member cities by each province. Each member city has to pay exactly the same amount of the allocated money to its province. In allocating this money, age gap and income gap are both taken into consideration. This section explains how these gaps are currently adjusted in the *Kokuho* scheme.

³⁸ In 2015 the average rate of contributions for *Kokuho* was 9.8%, whereas that for *Kumiai* was 5.7% (employers portions excluded).

6.3.1 Adjusting Age Gap

Age gap is seen between provinces and also within provinces. Age gap between provinces is adjusted through cost sharing for the Young-old (前期高齢者) based on their respective participation rates, as is described in Section 5 of this paper.

Age gap within provinces is adjusted as follows. Take City A for example, and let N_i and M_i indicate each number of *Kokuho* participants in its city and each national-average amount of annual medical expenses per person by 5-year age groups i respectively, then the total sum of $(M_i \times N_i)$ divided by the total number N of *Kokuho* participants in City A means the amount of annual medical expenses per person in that city, provided that medical expenses per person of City A by age were equal to the national average. The age-adjusted index is given by $Y/[\text{sum of } (M_i \times N_i)/N]$, where Y demotes the actual amount of annual medical expenses per person in City A.³⁹

If this index is more than 1, the age-adjusted medical expenses are relatively higher than the national average. Using this index, cost sharing among cities is executed.

6.3.2 Adjusting Income Gap

There are mainly two policy measures for the authorities to adjust income gap.⁴⁰ One is the general grant from the central government (普通調整交付金), and the other is the required money levied on its member cities by each province (国保事業費納付金).

The adjustment mechanism of the former is essentially the same as that of the *Old-old* scheme, as already explained in Section 4.3 of this paper. If Province P has its average annual income being equal to the national average, then it receives the standard 7% of its aggregated medical expenses as the general grant. If Province Q is rich, enjoying a higher income level, then its general grant is reduced to less than 7%. If Province R is poor, having its average income less than the national average, then it receives more than 7% as its general grant, which enables Province R to set the share of income-related insurance contributions to less than 50%.

All the statements above assume that the age-adjusted annual medical expenses per person in Provinces P, Q and R is same. If this amount is different among these provinces, then the general grant is further adjusted, being proportional to the age-adjusted index above explained in Section 6.3.1 of this paper.

Allocation of required money to the member cities (国保事業費納付金) is sophisticated. In allocating it, the money is divided into two parts; one is proportional to the head-count ratio (人数割), and the other is an income-proportional portion (所得割).⁴¹ There is a guideline that the standard shares of them are 50:50, provided that the average income of the region is equal to the national average. Any city with a higher (lower) level of average income is asked to have a share of more (less) than 50% for the income-proportional portion.

³⁹ In practice, the age-adjusted index is calculated as its moving average of the latest three years.

⁴⁰ Another measure is the subsidy for supporting insurers (保険者支援金).

⁴¹ In practice, the head-count ratio can be combined with the per-household portion, and the income-proportional portion can be matched with the real-estate-related one.

Take Province P for example which has 3 member cities, A, B, and C. Let assume that the amount of age-adjusted annual medical expenses per person of Province P (and its cities A, B, and C) is equal to the national average, and that each number of participants and the amount of average annual income in member cities are given as presented in Table 7. The amount of the average annual income per person in Province P is assumed to be equal to the national average (JPY 10,000), and the aggregate amount of required money for this province is assumed as JPY 100,000. Then, each share of two portions is 50:50 on the province basis, and each allocated amount is shown in Table 7.

Table 7 Allocation of Required Money: Example 1

City	Number of Participants	Average income (JPY)	Index of Medical Expenses	Required Money per Person (JPY)		Aggregate Amount of Required Money (JPY)			Income Ratio		
				Portion 1	Portion 2	Portion 1	Portion 2	Total	Portion 1	Portion 2	Total
A	50	10,000	1.0	500	500	25,000	25,000	50,000	0.050	0.050	0.100
B	20	17,500	1.0	500	875 (500×1.75)	10,000	17,500	27,500	0.0286	0.050	0.0786
C	30	5,000	1.0	500	250 (500×0.5)	15,000	7,500	22,500	0.100	0.050	0.150
Total	100	10,000	1.0	—	—	50,000	50,000	100,000	—	—	0.100

Note: It is assumed that the amount of age-adjusted annual medical expenses per person and the level of annual income for Province P are both the same as their national averages. Portion 1 indicates the part by the head-count ratio, and portion 2 means the income-proportional one. Figures highlighted in blue are the assumed ones.

Table 7 implies that without the income-proportional portion, the poor city C would have been forced to pay quite heavier burdens due to the portion by the head-count ratio only, though the head-count principle will equalize the burdens per person among cities in Province P. With the combined income-proportional portion, the relative burdens of City C are reduced, although its burdens still remain relatively heavy. Anyway, the income-proportional portion operates as a gap-decreasing factor, and enables each rate of insurance contributions (the income-proportional portion) of the member cities to be same if all their indexes of age-adjusted annual medical expenses per person remain same.⁴²

Table 8 Allocation of Required Money: Example 2

City	Number of Participants	Average income (JPY)	Index of Medical Expenses	Required Money per Person (JPY)		Aggregate Amount of Required Money (JPY)			Income Ratio		
				Portion 1	Portion 2	Portion 1	Portion 2	Total	Portion 1	Portion 2	Total
D	50	10,000	0.8	400	400	20,000	20,000	40,000	0.04	0.04	0.08
E	50	10,000	1.2	600	600	30,000	30,000	60,000	0.06	0.06	0.12
Total	100	10,000	1.0	—	—	50,000	50,000	100,000	—	—	0.10

Note: It is assumed that the average level of annual income in Province Q and its member cities D and E is all equal to the national average, and that each number of participants for D and E is also equal. The index of annual medical expenses per person is given as age-adjusted, and is assumed to be different between D and E as 0.8 vs 1.2. Figures highlighted in blue are the assumed ones.

⁴² This adjustment is done by the general grant from the central government (普通調整交付金).

Table 8 demonstrates another allocation of required money in the case that the indexes of age-adjusted annual medical expenses per person vary among different cities. Table 8 takes up Province Q which has two member cities, D and E. D and E have the only difference in levels of the index of medical expenses, assuming all other things being equal. It is shown that the required money for the member cities is proportional to the varying index of medical expenses, and this holds true for both portions. In short, a guiding principle is that if the average level of income is same for the two cities concerned within a certain province, the required money per person levied is proportional to the age-adjusted average medical expenses per person of each city.⁴³ The different level of the age-adjusted medical expenses per person remains untouched in cost sharing. It is a matter of each insurer, and insurers are encouraged to have more cost-effective healthcare services by other policy measures.

6.4 Offer of the Standard Contributions

When a province gives the formal notice of each annual amount of the required money to its member cities, it offers the standard insurance contributions to them, as well, as a pro forma amount. The comparative list of them together with the index of age-adjusted medical expenses per person and the average income can visualize their differences among member cities, and thereby promote their leveling within its province. This leveling is preferred after the unit of social pooling was scaled up to each province.

The base for calculating the standard insurance contributions is given by deducting two subsidies⁴⁴ (for supporting insurers (保険者支援) and for encouraging insurers (保険者努力支援)) from the required money, and adding the expenses for implementing health programs (保健事業).⁴⁵ In calculating standard contributions, each province takes into account the standard collection rate of contributions for respective cities.⁴⁶

6.5 Insurance Contributions⁴⁷

Each insurer (city) decides the actual contribution rate, referring to the standard one given by its province, with taking into account the compensating grants for reduced contributions (保険料軽減分).

Furthermore, some cities are able to have a lower rate in practice if they can enjoy special non-statutory transfers from general revenue of its own city, and/or they have a higher collection rate of contributions.

⁴³ There are some rooms, though exceptional, for provinces not to set the required money *completely* proportional to the indexes of medical expenses for their member cities.

⁴⁴ There is one more deduction: a subsidy to care for intractable diseases such as mental and children-related ones.

⁴⁵ Their examples are consciousness building, health guidance and encouraging medical consultation by using receipts and others.

⁴⁶ The standard collection rate of contributions for *Kokuho* was 83.3% in 2015 on average. In other words, around 17% of the total *Kokuho* households remained delinquent in paying insurance contributions in the same year.

⁴⁷ An overwhelming majority (87%) of cities have adopted the insurance “tax” for the legal term, instead of the insurance “contributions” in 2016.

Contributions for *Kokuho* are generally composed of following four portions: (a) income-related (所得割), (b) the real-estate-related (資産割), (c) per-person (均等割), and (d) per-household (平等割) portions. The former two portions are an ability-to-pay part, while the latter two are a part on benefit principle.^{48, 49, 50}

Reduced contributions are levied on persons with lower income. Reductions only apply to the per-person and per-household portions. The rates of reduction are 70%, 50% and 20% depending on the level of income.⁵¹

The upper ceiling for the annual amount of contributions per household are JPY800,000 in 2019, and this ceiling has been updated every year. The proportion of those households who are applied to this upper ceiling will gradually reach to 1.5% of the total *Kokuho* households in number.

In total, around 40% of the *Kokuho* households were exempted from paying the income-related portion due to their very low or zero taxable income in 2015. Only 15% paid the real-estate-related portion, and a little more than 50% were permitted to pay a reduced contribution levied on benefit principle.

7 Insurance Contributions in the *Kyokai* Scheme

The current scheme for employees in SMEs is *Kyokai* (協会), which is financially managed by a nationwide non-public organization, while the rate of its insurance contributions is set on a provincial basis. Its former scheme was called as *Seikan* (政管 : 政府管掌健康保険) which was managed by the central government and had only one unified rate of insurance contributions. The shift of the scheme to *Kyokai* took place in 2008.⁵²

Kyokai receives statutory transfers from general revenue. They currently amount to 16.4% of the aggregate annual medical expenses (copayments excluded). The main reason for these statutory transfers is the participants' lower level of income, compared with that for *Kumiai* or *Kyosai* participants as is presented in Table 2.⁵³ Age gap and income gap among different provinces are adjusted through transfers from general revenue, as well.⁵⁴

⁴⁸ Smaller cities usually have the real-estate-related portion, while larger ones do not necessarily have this portion. Some cities, though minor in number, do not have the per-household portion.

⁴⁹ In the employment-based healthcare schemes of Japan, there is only an income-related portion, and no other portions such as those on benefit principle.

⁵⁰ In China, the community-based system has a flat-rate per-person portion only, with no other portions.

⁵¹ In 2019, the respective thresholds of annual earnings for reductions of 70%, 50% and 20% are JPY 330,000, JPY 330,000 + (JPY 280,000 × *N*), and JPY 330,000 + (JPY 510,000) × *N*, where *N* is the number of household members. Recently around 40% of *Kokuho* participants pay reduced contributions.

⁵² This shift is in line with the policy that each province, which holds jurisdiction over establishing a system that provides high quality medical care, is to actively work through diminishing the gap in medical expenses per person between provinces.

⁵³ The overwhelming majority around 81% of business establishments participating *Kyokai* were those with 10 employees or less in 2017.

⁵⁴ On the other hand, *Kyokai* pays a substantial amount of supportive grants to the *Old-old* schemes and to *Kokuho* (for the young-old). In 2017, it amounted to 36.7% of its aggregated annual

The rate of insurance contributions differs between provinces, reflecting varying indexes of age-adjusted annual medical expenses per person (see Table 9) and different levels of salaries on average.⁵⁵

**Table 9 Gap of Contributions by Provinces in 2018:
The *Kyokai* Scheme (Top 3 and Bottom 3)**

Province	Rank	Rate of Contributions (%)
Saga (佐賀)	1	10.61
Tokushima (徳島)	2	10.28
Oita (大分)	3	10.26
⋮	⋮	⋮
Shizuoka (静岡)	45	9.77
Nagano (長野)	46	9.71
Niigata (新潟)	47	9.63

Source: Kyokai (2018) “Table of Contributions” (協会けんぽ「2018年度保険料額表」)

8 Concluding Remarks

Overall, thanks to full-fledged cost sharing among different ages, regions and occupations, together with free access to any medical service providers and a very generous refund system for high medical expenses, Japanese are under a distinctively egalitarian scheme of social security healthcare.⁵⁶ Yet, her aggregate annual amount of medical expenses as a ratio to GDP is relatively low among major old countries in the world.

Age gap and income gap are two major structural factors to be adjusted in cost sharing of social security healthcare. At the same time, a majority of Japanese take it for granted that gaps in medical expenses per person have to be reflected to varying amounts of copayments and relevant rates of insurance contributions among different healthcare schemes.

Cost sharing of social security healthcare is massively done in Japan through pooled insurance contributions (supportive grants) and public transfers. By and large, it is executed on a provincial basis.

expenditures.

⁵⁵ See Hokkaido Branch (2014), p.4 and pp.11-13 for more details.

⁵⁶ As far as social security system of healthcare, pensions and long-term care are concerned, Japan looks like a country under a profound socialism. Generally speaking, Japan is sustaining a society of mutual trust between people, and almost all Japanese government officials are clean, winning a sense of trust from a majority of people.

Due to persistent ongoing aging of her population, its cost sharing will further grow in the future. How to make it to be compatible with a cost-effective system still remains. Never-ending reforms will continue in Japan.^{57,58}

⁵⁷ Among others, halving the gap in medical expenses among regions is one of top priorities in current healthcare policies. Also the gender gap in medical expenses will be additionally taken into account in allocating the general grant from the central government (普通調整交付金) in *Kokuho*.

⁵⁸ Social security long-term care and medical assistance (in public assistance) in Japan will face more serious financial problems.

【Acknowledgements】

The present author is deeply indebted to valuable comments and helpful advices from Dr. Xinmei Wang, Prof. Xiaobing Feng, Mr. Kei-ichi Fukuyama (福山圭一), Mr. Takashi Yoshino (吉野隆之) and Mr. Michihide Akita (秋田倫秀) for revising this paper. He is very grateful for research grants from the JSPS (19H01496, 17H00991, 16H03629). The present author is solely responsible for any remaining errors.

References

- Hokkaido Branch (2014), “On setting the Rate of Insurance Contributions (「保険料率の算定方法等について」協会けんぽ北海道支部)” in Japanese, available on the website: <https://www.kyoukaikenpo.or.jp/~media/Files/hokkaido/hyogikai/h26/4/3.pdf>
- Honkawa Data Tribune (2019), “International Comparisons of Healthcare Expenditures: An Illustration (図録：高齢化とともに高まる医療費（各国比較）)” in Japanese, available on the website: <http://honkawa2.sakura.ne.jp/1900.html>
- Ikegami, N. and Campbell, J. C. (1995) “Medical Care in Japan,” *The New England Journal of Medicine*, 333, pp.1295-1299, available on the website: <https://www.nejm.org/doi/full/10.1056/nejm199511093331922>
- Ikegami, N. et al. (2011) “Japanese Universal Health Coverage: Evolution, Achievements, and Challenges,” *Lancet*, 378, pp.1106-1115, available on the website: <https://www.sciencedirect.com/science/article/pii/S0140673611608283>
- Iwabuchi, Y. (2013), *Healthcare Policy in Japan*, Chuohoki (岩渕豊『日本の医療政策』中央法規出版), in Japanese
- Kanda, T. and Nagatomo, M. (2017), *The New Scheme of Kokuho and Its Finance*, Jichiken, in Japanese (神田敏史・長友薫輝『新しい国保のしくみと財政』自治体研究社)
- Katayama, Y. (2018), “On the Social Insurance Healthcare System in China (片山ゆき「中国の公的医療保険制度について」ニッセイ基礎研究所報、pp.25-37)” in Japanese, available on the website: https://www.nli-research.co.jp/files/topics/57625_ext_18_0.pdf?site=nli
- Komatsu, H. (2008), “A Study on an Income-adjusted Equal Footing of Contributions in the Japanese *Old-old* Healthcare System” (小松秀和「後期高齢者医療制度の普通調整交付金算定式に関する考察」), in Japanese, DP-350, Project on Intergenerational Equity, <http://cis.ier.hit-u.ac.jp/Common/pdf/dp/2007/dp350.pdf>
- Ministry of Health, Labour and Welfare (2013), “Overview of Medical Service Regime in Japan” available on the website: https://www.mhlw.go.jp/bunya/iryohoken/iryohoken01/dl/01_eng.pdf
- (2014), “The Old-old Medical Insurance System (厚生労働省保険局「高齢者医療制度について」第75回社会保障審議会医療保険部会、資料3、5月19日), in Japanese, available on the website: <https://www.mhlw.go.jp/file/05-Shingikai-12601000-Seisakutoukatsukan-Sanjikanshitsu-Shakaihoshoutantou/0000046124.pdf>

————— (2016), “Documents for Explaining *Kokuho* (「保険局国民健康保険課説明資料」全国高齢者医療・国民健康保険主管課(部)長及び後期高齢者医療広域連合事務局長会議、2月29日)” in Japanese, available on the website:

<https://www.mhlw.go.jp/file/05-Shingikai-12401000-Hokenkyoku-Soumuka/0000113904.pdf>

————— (2017a), *The 2015 Annual Report on the Old-old Medical Insurance* (『後期高齢者医療事業年報』), in Japanese, available on the website:

<https://www.e-stat.go.jp/stat-search/files?page=1&layout=datalist&toukei=00450390&tstat=000001044948&cycle=0&tclass1=000001044953&tclass2=000001100455>

————— (2017b), “The 2015 Basic Statistical Data on Healthcare Insurance (医療保険に関する基礎資料：平成27年度の医療費等の状況)” in Japanese, available on the website:

https://www.mhlw.go.jp/file/06-Seisakujouhou-12400000-Hokenkyoku/kiso_h27.pdf

————— (2017c), “Health and Medical Services: Overview of the System and Basic Statistics,” available on the website:

<https://www.mhlw.go.jp/english/wp/wp-hw11/dl/02e.pdf>

————— (2017d), “Guidelines on Calculating the Required Money and the Standard Contributions for *Kokuho* (「国民健康保険における納付金及び標準保険料率の算定方法について：ガイドライン」)” in Japanese, available on the website:

<https://www.kokuho.or.jp/whlw/notice/lib/hoken56-6.pdf>

————— (2017e), *The 2015 Annual Report on Kokuho* (『国民健康保険事業年報』), in Japanese, available on the website:

<https://www.e-stat.go.jp/stat-search/files?page=1&layout=datalist&toukei=00450396&tstat=000001099255&cycle=8&tclass1=000001099263>

————— (2018a), “The 2016 National Expenditure on Healthcare (国民医療費の概況：平成28年度)” in Japanese, available on the website:

<https://www.mhlw.go.jp/toukei/saikin/hw/k-iryohi/16/dl/data.pdf>

————— (2018b), “The Latest Situations on Social Security Healthcare in Japan (「医療保険制度をめぐる状況」社会保障審議会医療保険部会資料1-2、4月19日)” in Japanese, available on the website:

https://www.mhlw.go.jp/file/05-Shingikai-12601000-Seisakutoukatsukan-Sanjikanshitsu_Shakaihoshoutantou/0000204021.pdf

————— (2018c), “A Users’ Guide on Refund of High Medical Expenses (「高額医療養費制度を利用される皆さまへ」(2018年8月診療分から))” in Japanese, available on the website:

<https://www.mhlw.go.jp/content/000333279.pdf>

————— (2019), “Documents for Explaining *Kokuho* (「保険局国民健康保険課説明資料」全国高齢者医療・国民健康保険主管課(部)長及び後期高齢者医療広域連合事務局長会議、3月12日)” in Japanese, available on the website:

<https://www.mhlw.go.jp/content/12401000/000488122.pdf>