CHAPTER 13

Provision of National Health Insurance "Model Benefits" to Japan's Prefectures

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Abstract Regional areas, in which land rents are relatively low, clearly possess a comparative advantage in the provision of elderly services. Nevertheless, regional municipalities do not welcome influxes of elderly residents, because such influxes disadvantage regional municipal governments by requiring them to shoulder a considerable financial burden for social security while providing virtually no increase in local tax revenues.

Influxes of elderly residents would be stimulated if the national government paid an amount corresponding to a "model benefit" for each insurance subscriber, based on the average per person benefit for that age cohort throughout the entire country.

The present chapter estimates that the model benefit would be 125,000 yen for each additional resident younger than 65, and 556,000 yen for each additional resident older than 65.

Keywords Efficient allocation of resources • Inflow of elderly residents • Model benefits • National Health Insurance • Reallocation of the number of hospital beds • Social insurance for the elderly

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1 Objective of the Present Chapter

The national and local governments in Japan share the burden of fiscal expenditure to fund social insurance for the elderly.[1] However, the system currently in effect has led to inefficient allocation of resources. This chapter analyzes how to reform this system of financing services for the elderly. Estimation of the amount of proposed "model benefits" to be provided by the national government to eliminate the misallocation of resources is a particular focus of the chapter.

Under Japan's current system, local governments must finance a certain portion of elderly residents' age-related social expenses (medical care, nursing, etc.), despite the fact that the elderly residents contribute almost no tax revenue to these administrations. On average, elderly residents produce a deficit for local governments, which results in two problems.

The first is that a local government with a large number of elderly residents is compelled to bear a significant fiscal burden for social services for the elderly, as a result of which it may be forced to curtail other local services. This situation could even lead to a population outflow.

The second is that this fiscal burden provides a disincentive to local governments to approve the construction of adequate facilities in their Elderly Welfare Plans. As a result, while elderly citizens may wish to move from large cities to rural areas, for example because they were born there or the weather is warmer, such moves are discouraged.[2]

A number of researchers have conducted research on the division of roles between the national and local governments in relation to medical and nursing care for the elderly. In particular, Iwamoto (1996, 1998, 2015) Hatta (1996, pp. 172–3; 2015a, 2016a, 2016b) and Suzuki (2010, 2015) suggest that if the national government directly financed the expense of medical care for the elderly by providing model benefits, local governments would no longer be motivated to impede the inflow of elderly residents.

Under this system, if the amount of model benefits provided by the national government to a prefecture exceeded the amount of actual benefits paid in the prefecture, the prefecture would be able to use the surplus at its own discretion; as a result, the greater the inflow of elderly residents, the greater the improvement in the fiscal condition of the local government concerned. Because an inflow of elderly residents would benefit the local economy through, for example, increased spending of pension benefits, local governments' incentives to inhibit inflows of the elderly would

disappear. The new system would also motivate local governments to control benefit expenditure, for example through preventative measures.

This chapter estimates two types of model benefits to be provided by the national government to local governments in order to assist in the realization of this policy goal.

First, it estimates model benefits to be provided to local governments based on the specific attributes of residents of the municipalities concerned. The analysis conducted in this paper indicates that each additional resident aged 64 or below would increase annual National Health Insurance benefits by an average of 125,000 yen, and each additional resident aged above 64 would increase benefits by an average of 556,000 yen. These model benefits will be termed "age-specific per person model benefits" (APMB). Under the new system, the national government would provide a grant to each prefecture in an amount equal to the product of APMB and the size of the population in each age cohort in that prefecture to finance National Health Insurance expenditure. If this system were introduced, the average per person grant provided by the national government to the prefectures would increase as the ratio of elderly residents in the prefecture increased, eliminating the incentive on the part of the prefectures to control the inflow of elderly residents.

However, the difference between the model benefits estimated in this way and actual National Health Insurance expenditure would be very large for some prefectures, including Saga Prefecture, Nagasaki Prefecture, and Kagoshima Prefecture. These prefectures would be required to supplement expenditure by more than 70,000 yen per person annually. Because this would represent a significant fiscal burden for local governments, some form of transitional measure may be necessary to allow adjustment in the initial stage of introduction of a model benefit system.

Next, therefore, the chapter estimates the amount of "transitional model benefits" to be provided by the national government to local governments during the phase of adjustment to the new system. This estimation takes into consideration the number of hospital beds allocated to each prefecture, a figure which has a strong influence on the current insurance benefit expenditure in each. The transitional model benefits would represent the amount of model benefits to be applied during the process of transition, until the application of the APMB (which would be based solely on the attributes of recipients).

2 Comparative Advantages of Regional Areas

Which industries can enable regional economies to grow?

In addition to primary industry, regional areas possess comparative advantages in the elderly services industry.

Residences, nursing facilities, and medical care facilities can be built at very low cost in regional cities because land prices are lower there than in huge metropolises. The average cost of residential land in Japan's rural areas is approximately 31,000 yen per square meter, compared with approximately 195,000 per square meter in the Tokyo metropolitan area. Migration to rural areas would, therefore, enable Japan's elderly population to lead more comfortable lives.

It would also represent considerable savings in terms of the nation's public expenditure on medical and nursing care. Viewed from the government's perspective, regional areas possess a clear comparative advantage over Tokyo for the siting of facilities for the elderly. In addition, because elderly residents would bring with them their entire pensions, as well as other forms of income, an inflow of elderly residents would represent a boon to local economies.

3 Why Local Governments Do Not Welcome Inflows of Elderly Residents

It is natural to assume that the majority of Japan's elderly citizens will wish to continue living in the large cities with which they are familiar. But there are also other elderly people who would like to return to their hometown, or who would like to live the country lifestyle that was unavailable to them when they were working. Despite this, however, only a limited proportion of Japan's elderly population is migrating to rural areas.

The reason for this is rooted in the local public finance system. A local government's tax revenues will barely increase if elderly residents move to a municipality. But the burden on the local government for social services, in particular National Health Insurance, will increase. Under the current system, if the elderly population increases, a local government will not only suffer the burden of expenses for nursing care facilities, but also later for medical care. Because of this, local governments have an incentive to control the migration of elderly residents into their areas.

Local governments in Japan have a policy tool to enable them to do so. The construction of new nursing care facilities will not be approved if it

does not accord with the plans for the provision of senior care facilities drawn up by the prefecture. However, prefectural facility construction plans are formulated based on the sum of the plans formulated by the cities, towns, and villages within the prefecture, and local governments are reluctant to actively formulate plans for the provision of facilities for the elderly.

4 Is There a Reason that Japan's Local Governments Are Required to Finance the Burden?

If the National Health Insurance system were reformed to provide local governments with an incentive to welcome elderly residents, the elderly would begin to move away from large metropolitan areas, towards rural areas.

This is clear from the cases of Florida and Arizona in the USA. In the USA, a public health insurance system called Medicare has been providing insurance for citizens aged 65 and over for decades. Because Medicare is a national system, elderly residents do not entail a burden of expense for Florida and Arizona. These states have therefore attempted by every means possible to attract elderly residents. As a result, wealthy elderly people have flowed to both states.

In Japan, unlike the USA, local governments are required to finance some of the expenses for elderly residents. There is a reason for this. If the national government were to assume responsibility for all payments that were actually made, local governments would have no incentive to economize on benefit expenditure. Japan's current system, requiring local governments to fund part of the burden, provides those local governments with powerful incentives to refrain from lavish expenditure in the area of National Health Insurance and to engage in preventative initiatives.

The author therefore proposes that the national government provide each local government with a grant equivalent to the National Health Insurance model benefit, which reflects the specific characteristics of the National Health Insurance subscribers in that local government's administrative region (for example, a national average benefit amount based on the age of each individual). Under this system, if the total amount of actual benefit payments exceeded the total amount of the grant supplied by the national government, the amount in excess would be made up by the local government. On the other hand, if the total amount actually paid

out as benefits were lower than the amount of the grant supplied by the national government, as a result of preventative initiatives on the part of the local government, the amount of the saving would be incorporated into the local government's general accounts. This would ultimately provide a stronger incentive for local governments to economize on benefit expenditure by means of preventative initiatives.

5 A National Government-funded "Model Benefit" System for National Health Insurance and its Effects

The proposed reform of the National Health Insurance system can be outlined as follows.

First, the existing local government-based system would be maintained. This would ensure that an incentive for local governments to put preventative initiatives in place would remain.[3]

Second, the national government would finance each local government with model benefits determined on the basis of the characteristics of the National Health Insurance subscribers resident in its administrative region. This would mean that National Health Insurance payments for the elderly would basically be financed by the national government.

Third, the local government would pay the difference between the amount financed by the national government (equal to the model benefits) and the amount actually paid as benefits. This amount could be either positive or negative.

Under this system, the net burden on local governments would be zero, on average. But if, for example, the local government neglected the implementation of preventative measures and as a result medical expenses exceeded the amount of the model benefits supplied for its elderly population, it would be the local government's responsibility to make up the extra amount.

We will term this proposed system a "national government-financed model benefit system for National Health Insurance." Because the implementation of this reform would shift that portion of the financing burden of benefit payments borne by local governments to the national government, it would correct the situation in which cities with large numbers of elderly residents have suffered a relatively heavy financial burden of expenditure on social services for the elderly. However, this reform would not

increase the total amount of benefits in Japan as a whole, and hence the total National Health Insurance burden on Japanese citizens as a whole would not increase.

The removal of the National Health Insurance burden on regional cities, towns and villages would have the following effects:

(1) The fiscal status of local governments with a large number of elderly residents would immediately improve.
(2) When elderly citizens moved to regional areas, they would bring their model benefits (determined on the basis of their specific characteristics) with them. Local governments would therefore welcome an inflow of elderly residents. As a result, they would attempt to attract retirees from big cities, for example by inviting tenders for new nursing care facilities.
(3) There would be steady inflows of elderly citizens to regional areas.
(4) This would encourage the migration of young people to regional areas in order to work for the facilities for the elderly, and a virtuous cycle would commence.

6 Estimation of Model Benefits

This section will attempt to estimate the amount of the different model benefits.

Aggregated data will be employed. For the purposes of this estimation, National Health Insurance subscribers will be divided into "elderly subscribers," aged 65 and above, and "young subscribers," aged under 65.[4] We will estimate the APMB for each.[5] For this estimation, the amount of National Health Insurance benefits for each prefecture will be termed B, the number of young subscribers will be termed N^-, and the number of elderly subscribers will be termed N^+. Regression analysis of the benefit per young subscriber, (B/N^-), with respect to the ratio of elderly subscribers to young subscribers, (N^+/N^-), gives the following result.

$$B/N^- = 125 + 556N^+/N^- \quad Adjusted\ R^2 = 0.602 \\ (3.226)\ (8.309) \tag{1}$$

It can be seen that as the ratio of elderly subscribers to young subscribers, (N^+/N^-), increases, the benefit per young subscriber, (B/N^-), also increases.

Multiplying both terms of this equation by N^- gives the following.

$$B = 125N^- + 556N^+ \tag{2}$$

This indicates that each additional *young* subscriber would increase annual National Health Insurance benefit payments by 125,000 yen, but each additional *elderly* subscriber would increase annual National Health Insurance benefit payments by 556,000 yen. These numbers represent the APMB for these two age groups. This equation therefore demonstrates that under the current system, an increase in the number of elderly subscribers in a region increases the amount of benefits paid and hence the National Health Insurance burden on the prefecture concerned.

Under the proposed system, the national government would provide APMB amounts for each age stratum of residents of the prefecture concerned. Equation (2) gives the National Health Insurance model benefits for the given number of young subscribers and elderly subscribers in that prefecture.

As pointed out above, those prefectures in which actual expenditure was lower than the grant provided by the national government would be able to use the surplus at their own discretion; local fiscal health would therefore improve as more elderly people moved to the administrative area in question. Because an inflow of elderly residents would benefit the local economy, this reform would eliminate the incentive on the part of local governments to control inflows of the elderly. Unlike the existing scheme, in which local governments are responsible for part of the burden of funding the system, the proposed scheme does not distort the allocation of resources.

Under this system, prefectures could not influence the amount provided by the national government. This would also give the prefectures an incentive to reduce social expenses for the elderly.

7 Estimation of Amount of Transitional Model Benefits

However, if the national government financed prefectural National Health Insurance benefits based on Eq. (2), the difference between the amount of the actual benefit payment and the amount of the grant could be very

large. For example, prefectures such as Saga Prefecture, Nagasaki Prefecture, and Kagoshima Prefecture would be forced to make up an amount of 70,000 yen per person per year. This would represent a considerable increase in the fiscal burden on local governments, making some form of transitional measures essential in practice.

In Japan at present, a specific number of hospital beds is allocated to each prefecture. The allocation of hospital beds on a per person basis differs significantly between prefectures. For example, the number of hospital beds allocated per National Health Insurance subscriber aged under 65 in Saitama Prefecture is three times as high as the number allocated in Kochi Prefecture

At the same time, the total amount of National Health Insurance benefits paid per resident is higher in regions with a higher allocation of hospital beds per resident. Supply tends to create demand. This explains the existence of prefectures with a significant national health expenditure that cannot be explained by their age composition.

It will therefore be useful to consider, as a transitional measure, model benefits that take into account the number of hospital beds in a prefecture. An estimation will be attempted here. Regression of the benefit per young subscriber, (B/N^-), with respect to the ratio of elderly subscribers to young subscribers, (N^+/N^-), and the number of hospital beds per person, (F/N^-), produces the following result.

$$B/N^- = 146 + 285N^+/N^- + 1602F/N^- + u$$
$$(7.491)\ (6.946) \qquad (11.523)$$
$$Adjusted\ R^2 = 0.900$$

The coefficient of determination for this equation is quite high. Multiplying both terms of the equation by N^- gives

$$B = 146N^- + 285N^+ + 1602F + u \cdot N^-$$

In other words, each additional young subscriber would increase annual National Health Insurance benefit payments by 150,000 yen in the prefecture in question, but each additional elderly subscriber would increase benefit payments by 290,000 yen. On the other hand, if the number of

hospital beds were to increase, this alone would increase benefit payments by 1.6 million yen per bed.

The theoretical values for National Health Insurance benefit payments for each prefecture obtained in this way represent expected values for benefits corresponding to the current age structure allocation of hospital beds in each prefecture. The amount of model benefits estimated here with consideration of the number of hospital beds will be termed "transitional model benefits."

Let us suppose that the national government provides transitional model benefits to the prefectures in the initial stage of the proposed reforms.

If the amount financed by the national government exceeded the actual benefits paid, the prefecture would again be able to use the surplus at its own discretion; as a result, the greater the inflow of elderly residents, the greater the benefit to the local economy and the greater the improvement in local finances. Because of this, incentives to control inflows of the elderly would disappear.

In this case also, the fact that the prefectures could not influence the amount provided by the national government would give them an incentive to reduce expenses per person.

8 The Process of Transition

Because the allocation of hospital beds is inherently arbitrary, the transitional model benefits system would not produce an efficient mechanism for the choice of living area on the part of health insurance subscribers. Prefectures with an excessive allocation of hospital beds would receive a greater amount of National Health Insurance benefits, and would therefore be able to construct abundant facilities for the elderly. This would mean that the choice of region of residence by the elderly would be dependent upon an arbitrary allocation of hospital beds.

It would therefore be necessary to reallocate the number of hospital beds in Japan's regions to cope with the different demand for medical care in each region. To carry out such a reallocation with minimal political resistance, it would be useful to offer compensation to vested interests in administrative regions to which a large number of hospital beds are currently allocated. One method of doing so would be to allow local governments to trade rights over allocated hospital beds with other local governments. Another possibility would be to uniformly reduce the number of hospital beds allocated to local governments by 10% each year, and

reallocate the number of beds that has been reduced to other regions through bidding.[6] By this means, in ten years the entire current allocation of hospital beds would have been retired, and all beds would have been reallocated through bidding. This would reallocate physicians from regions with an excessive number to underpopulated regions, and correct the current provision of excessive health care benefits to regions with too many physicians.[7]

9 Conclusion

The migration of elderly citizens to regional areas represents the most effective use of land from the perspective of the nation as a whole. In addition, because these elderly citizens would bring their pensions with them, such a movement would also benefit local economies. Nevertheless, this is not happening in Japan, because under the current National Health Insurance system an inflow of elderly residents would place a significant burden on the public finances of local governments, a situation that discourages local governments from providing facilities for the elderly. The design of the current National Health Insurance system ensures that local governments will attempt to restrict inflows of elderly residents.

In Japan up to the present, the national government has compelled governments in regional areas to use local tax revenues in order to partially finance even services which should, fundamentally, be entirely financed by the national government. As a result, local governments have been reluctant to accept the elderly, low-income earners, and others who would provide little tax revenue for their areas. National systems artificially push the elderly and low-income earners into large cities, which do not possess a comparative advantage in the provision of services for these residents. Of these national systems, this tendency is particularly marked in the National Health Insurance system.

This chapter has proposed that the national government should provide National Health Insurance model benefits to Japan's prefectures, allowing the prefectures to freely use any surpluses over the amount of benefits actually paid at their own discretion. This reform would eliminate the incentive for local governments to discourage inflows of the elderly, and would offer them an incentive to economize on benefit payments through preventative initiatives.

This chapter has estimated the amount of final model benefits, APMB, based exclusively on the age of National Health Insurance subscribers, in

addition to transitional model benefits, which consider the number of hospital beds allocated to the prefecture. It has also proposed measures to enable the transition from the transitional model benefit to the final model benefit.

If the system of regional public finances related to social expenditure for the elderly were reformed in the manner suggested here, and the fiscal burden for the elderly was removed from local governments, local governments in regional areas would approve construction of facilities for the elderly, allowing the inflow of elderly residents with their pensions. Taking advantage of inexpensive land prices, the greatest comparative advantage possessed by regional areas, a new industry of social work would be created in regional areas, contributing to their revitalization. A steady flow of elderly citizens from large cities to regional areas would also create the possibility of a similar movement among young people seeking employment in the area of elderly services.

At present, the Ministry of Health, Labour and Welfare is entirely preoccupied with integrating management of National Health Insurance at the prefectural level, and appears to have no intention of launching reforms of this type. However, the present system is under severe strain.

Similar reforms are also necessary in the areas of education and the welfare system. Viewed from the perspective of growth strategies for Japan as a whole, now, when the government is particularly concerned with the issue of regional revitalization, is precisely the time to push ahead with the reforms proposed in this chapter.

Notes

1. In the present chapter, local governments include both prefectural and municipal administrations.
2. At present, National Health Insurance benefits are being aggregated at the prefectural level. Because the prefectures will still face a burden even when this process is completed, the factors which work to control inflows of elderly residents will still be in effect. In addition, because this system will basically mean government subsidization of the actual cost of treatment, it will not offer prefectures any motivation to economize on benefit payments.
3. At present, benefit payments are being aggregated at the prefectural level. Nevertheless, this still produces a greater incentive for the reduction of benefit payments than would be the case if the government provided the payments en bloc. However, if the focus were returned to the city, town, and village level, the incentive would become stronger.

4. Because students and homemakers are included in the category of subscribers under the age of 65, they cannot be called "workers." At the same time, because people aged 60 and over are also included, they cannot be called "young people" in the normally accepted sense. However, because they are young by comparison with elderly people aged 65 and above, this category will be called "young subscribers."
5. If we were able to use micro data, it would be possible to estimate model benefits for each age group. However, for the present estimation we are making use of macro data only, and therefore divide the population into "the young" and "the elderly."
6. The same result could be achieved by raising the annual rental fee paid to the government by the holders of rights by 10% increments.
7. For concrete measures to be put in place during the transitional phase, see Hatta (2016b).

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