## ESS Extension of Social Security

# Achieving health insurance for all: <br> Lessons from the Republic of Korea 

Soonman Kwon

ESS Paper $\mathbf{N}^{\mathbf{0}} \mathbf{1}$

Publications of the International Labour Office enjoy copyright under Protocol 2 of the Universal Copyright Convention. Nevertheless, short excerpts from them may be reproduced without authorization, on condition that the source is indicated. For rights of reproduction or translation, application should be made to the Publications Bureau (Rights and Permissions), International Labour Office, CH-1211 Geneva 22, Switzerland. The International Labour Office welcomes such applications.

Libraries, institutions and other users registered in the United Kingdom with the Copyright Licensing Agency, 90 Tottenham Court Road, London W1T 4LP [Fax: (+44) (0)20 7631 5500; email: cla@cla.co.uk], in the United States with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923 [Fax: (+1) (978) 750 4470; email: info@copyright.com] or in other countries with associated Reproduction Rights Organizations, may make photocopies in accordance with the licences issued to them for this purpose.

ILO / Soonman Kwon<br>Achieving health insurance for all : Lessons from the Republic of Korea, Working Paper No. 1<br>Geneva, International Labour Office, 2002<br>Health insurance, universal benefit scheme, Korea R.<br>02.07.1<br>ISBN 92-2-112795-8<br>ISSN 1020-9581: Extension of Social Security (ESS) Working Paper Series<br>Also available online in English: Achieving health insurance for all : Lessons from the Republic of Korea, Working Paper No. 1 (ISBN 92-2-112796-6; ISSN 1020-959X)

ILO Cataloguing in Publication Data

The designations employed in ILO publications, which are in conformity with United Nations practice, and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of the International Labour Office concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers.

The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with their authors, and publication does not constitute an endorsement by the International Labour Office of the opinions expressed in them.

Reference to names of firms and commercial products and processes does not imply their endorsement by the International Labour Office, and any failure to mention a particular firm, commercial product or process is not a sign of disapproval.

ILO publications can be obtained through major booksellers or ILO local offices in many countries, or direct from ILO Publications, International Labour Office, CH-1211 Geneva 22, Switzerland. Catalogues or lists of new publications are available free of charge from the above address, or by email: pubvente@ilo.org

Visit our websites: www.ilo.org/publns; www.ilo.org/public/english/socsec/pol

## Contents

Page
Summary ..... iv
1 Introduction .....  1
2 Historical background .....  1
2.1 The process of extending health insurance. .....  1
2.2 The political and economic context .....  2
2.2.1 The introduction of health insurance .....  2
2.2.2 The extension of health insurance to the self-employed .....  3
3 Financing health care .....  5
3.1 The structure of the National Health Insurance system .....  5
3.2 Contribution and benefits .....  8
3.2.1 Contribution .....  8
3.2.2 Government subsidies and risk pooling .....  9
3.2.3 Benefits ..... 11
3.3 Financial distress ..... 13
3.4 Merger of health insurance societies ..... 17
3.5 Private health schemes ..... 18
4 Organization of health care delivery ..... 18
4.1 Health care providers ..... 18
4.2 The payment system for health care providers ..... 20
4.2.1 Background ..... 20
4.2.2 Diagnosis Related Group (DRG)-based prospective payment ..... 20
4.2.3 Negotiation between the insurer and providers ..... 22
4.2.4 Prerequisites for the payment system reform ..... 23
5 Concluding remarks ..... 23
References ..... 25

## Summary ${ }^{1}$

It took only 12 years for the Republic of Korea to extend its social health insurance to the entire population since its first introduction to employees in large corporations in 1977. Rapid economic growth, the policies implemented by the military regime, and the design of a pluralistic insurance system based on separate insurance societies for different employee categories all contributed to the rapid extension of health insurance. Separating employees and the self-employed and first covering employees based on an employer mandate has been an easier way to extend coverage. But rapid extension to the population has resulted in several problems, such as low contribution levels with limited health benefits, little involvement of the public sector in health care delivery, cost inflation, and financial distress. Concerns regarding both the inequity in health care financing between employment categories and the chronic fiscal deficit of health insurance for the self-employed led to the recent merger of all health insurance societies into one.

[^0]
## 1 Introduction ${ }^{2}$

This paper aims to discuss the historical background and major issues related to the extension of the national health insurance scheme in the Republic of Korea. Social insurance for health care was first introduced to industrial workers in large corporations in 1977, and it achieved universal coverage of population by 1989. Rapid economic growth, the policies implemented by the military regime, and the design of a pluralistic insurance system based on multiple insurance societies all contributed to the rapid extension of health insurance to the population. But rapid extension has resulted in several problems in the health insurance system, such as low contribution levels with limited health benefits, little involvement of the public sector in health care delivery, cost inflation, and financial distress. Recently health insurance societies were merged into one and the national health insurance system now has a single insurer made up of two separate insurance funds.

The paper is organized as follows: Section 2 examines the historical process as well as the political and economic contexts associated with the introduction and extension of national health insurance in the Republic of Korea. Section 3 presents the main features of the health insurance scheme in the Republic of Korea such as contribution and benefits, administrative structure, financial distress, and the merger of health insurance societies. Section 4 examines the characteristics of the organization of health care delivery including health care providers and how the National Health Insurance scheme (the NHI) reimburses them. The paper concludes by presenting summaries and lessons from the experience of the Republic of Korea in extending health insurance to cover the whole population.

## 2 Historical background

### 2.1 The process of extending health insurance

The main strategy of extending health insurance in the Republic of Korea has been first to make insurance mandatory for employees in the government, teaching and industrial sectors, and then to extend coverage to the self-employed. Health insurance for employees is based on workplaces, and for the self-employed it is based on regions. Employees tend to have a greater ability to pay health insurance contributions than the self-employed, and it is easier to assess employees' contribution levels and to collect contributions, which are deducted by the employer from the employee's salary and paid directly to the insurer. In contrast, the income of the self-employed tends to be more difficult to assess, and the collection of contributions is also more complicated. Therefore, before the Government extended health insurance to the selfemployed, there were pilot programmes in both urban and rural areas. The financing of health

[^1]care for employees and the self-employed was separated in order to better address the different problems associated with the two employment categories.

The Health Insurance Law was enacted in December 1963 by the military government immediately after its coup d'état. Due to the country's weak economic and social infrastructure, the law eliminated mandatory insurance coverage, and social insurance for health care was not actually implemented until the mid seventies. A substantial revision to the Health Insurance Law in December 1976 was prompted by the social development element of the Government's Fourth (five-year) Economic Development Plan (1977-1981).

In 1977 the first group to be covered by compulsory health insurance were employees of large corporations with more than 500 workers (a medical aid programme for the poor (Medicaid) also started in $1977^{3}$ ). In 1979, health insurance was extended to government employees and teachers (January) and to those working in corporations with more than 300 employees (July). In January 1981, coverage was extended to industrial workers in firms with more than 100 employees. Health insurance for industrial workers was further extended to small enterprises with more than 16 employees in 1983, and to those with more than 5 employees in 1988.

For the purpose of extending health insurance to the self-employed, the Government implemented a pilot programme for the self-employed in three rural areas in 1981, and in one urban area and two additional rural areas in 1982. The health insurance programme was joined by the rest of the rural self-employed in January 1988, and by the rest of the urban selfemployed in 1989. Therefore, in the 12 years between 1977 and 1989, the Republic of Korea achieved universal population coverage of social health insurance. Administration of the national insurance scheme was through various insurance societies covering specific groups.

### 2.2 The political and economic context

### 2.2.1 The introduction of health insurance

Social insurance for health care in the Republic of Korea was introduced and extended mainly because of the authoritarian military regime. National health insurance was initiated by the state and not by labour or capital. When the military government first came to power in the early sixties, it wanted to introduce a social security system to obtain political legitimacy without placing an excessive burden on the economy. Driven by the country's need for economic development, the military government was reluctant to mobilize resources away from the economic sector to the health and social welfare sector. Consequently the first Health Insurance Law (1963) dropped the element of compulsory coverage, which is an essential component of a social insurance scheme.

A series of five-year Economic Development Plans formulated by President Park Chunghee, which emphasized exports, improved the country's economic well-being. The

[^2]Government began to recognize the importance of a welfare system, and the Fourth Economic Development Plan of the mid seventies placed some emphasis on social development that aimed to distribute the fruits of economic development to workers. The substantial revision of the Health Insurance Law in 1976 was an important element of the social development plan. At that time, the Government shifted the focus of its health policy from public health development and family planning programmes to programmes such as social security that benefited a broader range of population groups.

The evaluation in the early seventies that the health care system of the Republic of Korea was inferior to that of North Korea encouraged the Government of the Republic of Korea to introduce the social insurance scheme for health care (Kim 1989). Kim also states that capital (i.e., the big employers) supported, though did not initiate, the idea of social health insurance based on multiple insurance societies because it expected to have a financial stake in the management of the accumulated surplus of firm-level insurance societies.

With a limited supply of health care institutions in the public sector, the Republic of Korea decided to adopt a National Health Insurance (NHI) approach rather than a National Health Service (NHS) approach. A contribution-based insurance system made possible the introduction of health insurance with a minimum of funding by the Government. The NHI scheme was founded on multiple insurance societies that were based on enterprises and expected to be autonomous in operation. However, the public regarded the social health insurance more as a welfare benefit, causing the Government to design a health insurance system with very low contributions and as a result, limited health benefits. The Government's priority of rapidly extending insurance coverage throughout the population meant that contributions could not be set high enough to support comprehensive health benefit coverage at a later date.

### 2.2.2 The extension of health insurance to the self-employed

Both economic and political factors contributed to the rapid extension of health insurance to the self-employed, the last group to join the NHI. First of all, the booming economy of the late eighties substantially improved the ability of the self-employed to pay for social insurance. The economy of the Republic of Korea enjoyed record high annual growth rates of about 12 per cent between 1986 and 1988, and large current-account surpluses existed. The Government had the fiscal capacity to provide a subsidy to the health insurance for the self-employed.

Secondly, as a political factor, President Chun Doowhan and the presidential candidate of the ruling party Roh Taewoo were former military generals and wanted to obtain political support and legitimacy by proposing universal health insurance coverage. The 1987 presidential election prompted the ruling party to announce an expansion of social welfare programmes as a major item on their campaign agenda. In 1986, the Government announced plans to cover the self-employed in the NHI, to introduce a national pension scheme and to implement a minimum wage system. The Government was prompted to provide health insurance to the self-employed because of the increasing inequity between the amounts paid for
medical care by the (insured) employed and the (uninsured) self-employed. This is because the social health insurance system reimbursed providers based on a regulated fee schedule, which motivated providers to charge higher and higher fees to the uninsured. The difference between the regulated fees paid by the employed workforce under the health insurance scheme and the market price paid by the uninsured self-employed increased over time. This cost-shifting from the better off employed sector to the poorer self-employed sector became increasingly viewed as a serious problem of inequitable distribution of resources.

As the extension of health insurance to the self-employed was being implemented, heated discussions arose regarding the administrative structure of the universal health insurance system. The debate centred on whether the health insurance for the self-employed should be administered by multiple insurance societies (the 'pluralistic' approach used at the time by the NHI), or be based on a single insurer with the merging of existing insurance societies of industrial workers. Through the nationwide contribution schedule and risk pooling, a single insurer-system would have had the benefit, at least in the short run, of a smooth extension of the health insurance to the self-employed by absorbing the effects of its probable fiscal deficits. However, the Government decided to keep the existing approach of multiple insurance societies mainly to minimize its potential burden of health care financing on the Government in the long run. Both employers and workers ${ }^{4}$ in the existing insurance societies for industrial employees supported the Government's decision.

Organized labour has played a relatively small role in the introduction and extension of national health insurance in the Republic of Korea. Labour unions became active only in the late eighties and were in most cases organized in the large corporations already covered by the social insurance scheme since its inception. Furthermore, labour unions have been more interested in the basic terms of employment such as wages and working conditions rather than in employment benefits and health insurance.

Contrary to the rather smooth extension of health insurance to government employees and teachers and industrial workers, its extension to the self-employed faced tough resistance from the self-employed themselves. Farmers refused to pay contributions and requested major reforms in the health insurance scheme such as a discount on or an exemption to the contribution. They also required changes in the method of assessing contribution levels (to be based on income only rather than on both income and property); an increase in the Government subsidy to the insurance societies for the self-employed; an expansion of health care facilities in rural areas for better accessibility to medical care; and a change in the governance structure of insurance societies.

Farmers' organizations led the protests and made coalitions with progressive civic groups calling for general health insurance reform. Consequently, farmers initially troubled by the economic burden of contribution joined the health insurance reform movement calling for a merger of the health insurance societies. Although the NHI system managed to stick to the pluralistic approach of multiple health insurance societies until July 2000, the Government

[^3]responded to the farmers' protests by promising to increase its subsidy to the health insurance for the self-employed from 33 per cent to 50 per cent.

## 3 Financing health care

### 3.1 The structure of the National Health Insurance system

There were three different types of health insurance programmes (table 1):

1) Government employees and teachers and their dependents (10.4 per cent of the population);
2) Industrial workers and their dependents ( 36.0 per cent of the population);
3) The self-employed ( 50.1 per cent of the population), the so-called regional health insurance.

As of 1998 , the Medicaid programme covered the rest of the 3.5 per cent of the population.

Table 1. Insured and their dependents according to employment category, 1979-1998 (in ,000)

|  |  | 1979 | 1985 | 1986 | 1987 | 1988 | 1989 | 1998 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Govt. \& school employees | Insured | 741 | 1039 | 1074 | 1108 | 1158 | 1170 | 1418 |
| (10.4\% of pop) | Dependents | 2303 | 3171 | 3254 | 3256 | 3350 | 3301 | 3536 |
|  | Total govt. \& school employees | 3044 | 4210 | 4329 | 4364 | 4508 | 4471 | 4954 |
| Industrial workers | Insured | 1970 | 3910 | 4309 | 4866 | 5269 | 5309 | 5121 |
| (36.0\% of pop) | Dependents | 2882 | 8307 | 8985 | 10105 | 11000 | 11202 | 10732 |
|  | Total industrial workers | 4852 | 12215 | 13294 | 14971 | 16269 | 16511 | 15853 |
| Self-employed (50.1\% of pop) | Insured | - | 274 | 241 | 227 | 6654 | 6361 | 3388 |
|  | Household | - | 61 | 56 | 54 | 1681 | 1650 | 1119 |
|  | Insured | - | 101 | $98$ | $89$ | $123$ | $12579$ | 20278 |
|  | Household | - | 24 | 24 | 22 | 31 | 3703 | 6782 |
| Total self-employed: | Total insured self-employed | - | 375 | 339 | 317 | 6777 | 18940 | 23665 |
|  | Total household self-employed | - | 85 | 80 | 75 | 1711 | 5354 | 7900 |
| Medicaid | Total Medicaid | 2134 | 3259 | 4386 | 4386 | 4290 | 4246 | 1323 |

Note: Contribution to the health insurance for government \& school employees and industrial workers does not vary according to the number of dependents, but it does in the case of health insurance for the self-employed

As of 1998, there was a single insurance society for government and school employees, 142 insurance societies for industrial workers ${ }^{5}$, and a total of 227 insurance societies for the self-employed ( 92 in rural areas and 135 in urban areas).

Differences exist in the age structure of the insured in the three types of health insurance. Most notably, the government and school employees' health insurance has a relatively larger proportion of the over-70 age group, and the industrial workers' health insurance has a relatively larger proportion of the 20-29 age group (table 2 ).

Table 2. Insured persons by sex and age group, 1999 (in ,000)

|  | Government and school employees |  |  | Industrial workers |  |  | Self-employed |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men | Women | Total | Men | Women | Total | Men | Women | Total |
| 0-9 | 360 | 319 | 680 | 1310 | 1161 | 2471 | 1810 | 1613 | 3423 |
| 10-19 | 353 | 321 | 674 | 1088 | 1050 | 2138 | 2013 | 1836 | 3849 |
| 20-29 | 429 | 410 | 839 | 1783 | 1855 | 3638 | 1872 | 1836 | 3708 |
| 30-39 | 385 | 439 | 824 | 1714 | 1475 | 3189 | 2269 | 2296 | 4565 |
| 40-49 | 329 | 329 | 658 | 1022 | 977 | 1999 | 1910 | 1847 | 3758 |
| 50-59 | 231 | 235 | 466 | 743 | 844 | 1587 | 1094 | 1056 | 2150 |
| 60-69 | 174 | 239 | 413 | 586 | 631 | 1217 | 528 | 696 | 1224 |
| 70+ | 113 | 193 | 306 | 235 | 372 | 607 | 260 | 531 | 792 |
| Total | 2374 | 2485 | 4859 | 8481 | 8365 | 16847 | 11757 | 11711 | 23467 |

Source: National Health Insurance Corporation, Health insurance statistics, 2000.

The Republic of Korea adopted the pluralistic health insurance approach for political reasons. The advantages are that each society manages similar risk types, and that problems associated with different degrees of income assessment within the two main groups (employed and self-employed) are avoided. The pluralistic approach allows for the possibility of self-governance by its members; this decentralized decision-making can help members design their own insurance benefits to meet their budgetary and health care needs, although this has not actually happened. Compared with the single payer approach, a philosophy of self-governance and self-financing in each insurance society could also minimize the role of Government, particularly in financing. However, many health insurance societies in rural areas were too small to benefit from economies of scale in terms of risk pooling. They were also harassed by stifling interventions by the Government.

[^4]The Republic of Korea has never seriously considered introducing competition in health insurance markets by letting the insured choose their insurers, nor by allowing selective contracting between the insurer and provider. Lack of competition among insurance societies has resulted in inefficiency and bureaucratic failure. Health insurance societies had little financial incentive to act as prudent purchasers of medical care for the insured. Therefore, health insurance societies have not actually exercised their bargaining power with providers. Except for a simple Utilization Review Programme ${ }^{6}$, health insurance societies were merely financial intermediaries that channel funds to providers.

### 3.2 Contribution and benefits

### 3.2.1 Contribution

Health insurance contribution is comparable to an earmarked and proportional tax that employees and employers share equally ${ }^{7}$. However, because reliable information about the incomes of the self-employed are only partially available, the health insurance societies for the self-employed and those for employees use different schedules to determine contribution levels. If the insured do not pay the contribution for more than three months, access to insurance benefit is denied ${ }^{8}$. The employees working in the regional offices of the self-employed insurance societies have played a critical role in assessing the income and property of the self-employed and collecting contributions.

The new contribution formula in the health insurance for the self-employed consists of two parts: property and income (table 3). The 'property' part of the contribution relies on the property and vehicle that the household owns. The 'income' part of the contribution is assessed according to two groupings: taxed income or estimated income. 'Taxed income' is used for those whose annual taxable income is greater than 5 million Won (US\$4,500), and 'estimated income' for those whose annual taxable income is less than 5 million Won. Calculation of 'estimated income' takes into account not only household property and vehicle tax but also the age and sex of the insured. 'Estimated income' has 30 categories and 'taxed income' has 50 categories, as does the 'property' part of the contribution. In 1999, the percentage of self-employed contributions assessed on 'estimated income' ( 52.5 per cent) was greater than those assessed on 'taxed income' (only 10.6 per cent).

[^5]Table 3. Contribution structure of the health insurance for the self-employed, 1999 (in percentages)

| Income-based ( $63 \%$ of total contribution) |  | Property-based (37\% of total contribution) |  |
| :---: | :---: | :---: | :---: |
| Estimated income (for those whose income is under US\$4,500) | Taxed income (for those whose income is over US\$4,500) | Assets: excluding vehicle (50 categories) | Assets: <br> vehicle only <br> (7 categories) |
| (30 categories) | (50 categories) |  |  |

Source: National Health Insurance Corporation, Health insurance statistics, 2000

Due to the booming economy and improvement in earnings, health insurance contribution rates for government and school employees and industrial workers were stable around 3 per cent to 4 per cent of income until 1997 (table 4). However, since 1997, government and school employees have spent more on health care, causing their health insurance societies to raise contribution rates. For example, in 1999 the average contribution rate for government and school employees rose to 5.6 per cent of income, while for industrial workers the average contribution rate was 3.8 per cent of income with its range from 3.0 to 4.2 per cent in different insurance societies. Even so, from the perspective of industrialized nations, the contribution rate of 5.6 per cent is still rather low.

Table 4. Health insurance average contribution rates for different groups of workers, 1991-1999 (in percentage of income)

| Year | 1991 | 1993 | 1995 | 1997 | 1998 | 1999 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Govt. \& school employees | 4.6 | 3.8 | 3.8 | 3.8 | 4.2 | 5.6 |
| Industrial employees | 3.1 | 3.1 | 3.0 | 3.1 | 3.3 | 3.8 |

Source: National Health Insurance Corporation, Health insurance statistics, various years.

### 3.2.2 Government subsidies and risk pooling

The Government subsidises the insurance societies for the self-employed only by covering administrative costs and a proportion of the lower income group's contributions. As mentioned earlier, the Government initiated this subsidy to provide a smooth extension of health insurance to the self-employed. Over time, the Government has increased its subsidy to the health insurance for the self-employed. However, the relative share of Government subsidy in the revenue of the regional (self-employed) health insurance has been decreasing ever since its introduction. In 1988, the proportion of Government subsidy in the total revenue of the regional health insurance was 44.1 per cent, which by 1999 had fallen to 25.6 per cent (table 5).

Table 5. Revenue structure of the health insurance societies for the self-employed, 1989-98 (as a percentage of total revenue)

| Year | 1988 | 1989 | 1991 | 1993 | 1995 | 1997 | 1998 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Insured contributions | 54.3 | 56.5 | 55.4 | 55.5 | 53.0 | 54.2 | 57.2 |
| Government subsidy | 44.1 | 41.5 | 38.6 | 33.2 | 30.2 | 26.7 | 25.6 |
| Revenue sharing | - | - | 3.0 | 4.8 | 9.4 | 13.6 | 10.9 |
| Others | 1.6 | 2.0 | 3.0 | 6.5 | 7.4 | 5.5 | 6.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: National Health Insurance Corporation, Health insurance statistics, various years.

Before the insurance societies were merged in July 2000, a revenue sharing mechanism for risk pooling, the 'Fiscal Stabilization Fund', was established. This fund reallocated revenues across insurance societies for two reasons: 1) to take account of catastrophic expenses (from 1991); and 2) to account for the varying proportion of the elderly in the insured (from 1995). The health insurance societies for the self-employed were the major beneficiaries of the revenue sharing mechanism, although it still did not solve their problem of fiscal deficits. For instance, the proportion of the subsidy from the Fiscal Stabilization Fund in the total revenue of the regional (self-employed) health insurance decreased from 13.6 per cent in 1997 to 10.9 percent in 1998 (table 5).

Aiming for a smooth introduction of health insurance to the population, the NHI adopted a policy of low contributions with limited benefits. But the attempt to raise contributions for fiscal solvency and the attempt to expand benefits has faced resistance by the insured, particularly the self-employed. A drop in the proportion of government subsidy to the regional health insurance led to a sharp increase in the contribution of the selfemployed (table 6).

Table 6. Average monthly contribution according to different health insurance programmes, 1991-1999 (in Won)

| Health Insurance | 1991 | 1993 | 1995 | 1997 | 1998 | 1999 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Govt. and school employees <br> (Per Insuree) * | 12586 | 12816 | 14339 | 16205 | 18359 | 32307 |
| Industrial workers <br> (Per Insuree) * | 8790 | 10884 | 13165 | 16253 | 17374 | 20066 |
| Self-employed <br> (per household) | 12144 | 13861 | 15508 | 22449 | 25619 | 28624 |

Source: National Health Insurance Corporation, Health insurance statistics, various years.

* Only the employees' contribution

In 1998, the self-employed were paying higher contributions than industrial workers and government employees. Consequently, the contribution collection rate by the regional health insurance societies has been lower since the highest collection rate in 1993 (table 7). The economic crisis that broke out in November 1997 resulted in their lowest collection rate of 89.6 per cent in 1998 .

Table 7. Contribution collection rates for the self-employed in the health insurance schemes, 1989-1999 (in percentages)

| Year | 1989 | 1991 | 1993 | 1995 | 1997 | 1998 | 1999 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Collection Rate | 83.6 | 93.5 | 98.7 | 97.0 | 95.8 | 89.6 | 92.7 |

Source: National Health Insurance Corporation, Health insurance statistics, various years.

### 3.2.3 Benefits

Even before the health insurance societies were merged, there was no difference in statutory benefits between the various insurance societies. The statutory benefit package includes medical and surgical services, maternity care, hospitalization, pharmaceuticals, acupuncture treatment, etc. The benefit package also provides a health check-up every two years for the insured and any dependents above 40 years old. There is no cash benefit for sickness and maternity ${ }^{9}$. The NHI does not provide coverage for ultrasounds, MRIs (Magnetic Resonance Imaging), vaccinations, meals during hospitalization, home care, traditional medication, private hospital rooms (rooms with less than six beds), etc. Until 1994, the insured were eligible for benefits for up to 180 days per year only. After 1994 the benefit days increased by 30 days each year, and as of 2000 , there is no limit.

The insurance specifies the medical services and procedures for the benefit package. However, if the insurance were to specify those medical services that it would not cover (i.e., a 'negative' list), and if all other available services were included in its benefit package, the benefit coverage would inevitably be more extensive. The process of updating the benefit coverage to take account of the development of medical science and technology has been rather slow. The insurers' financial concerns have driven the decisions regarding benefit coverage, rather than the patients' need for medical treatment and cost-effective medical interventions.

As of 2000, for insured medical services the insured pays 20 per cent of the medical costs in the event of inpatient care. For outpatient care, there are differential co-payment rates depending on the types of health care institutions - 55 per cent in general hospitals and 40 per cent in other hospitals. For visits to the doctor the co-payment rate is 30 per cent where the total medical cost is greater than 12,000 Won (about US\$ $\$ 10$ ); otherwise, the patient pays a basic fee of 3,200 Won. Since doctors recommend very frequent visits for

[^6]outpatient care, patients' out-of-pocket payments for a single episode of illness can be significant.

In addition to the co-payment for insured medical services, patients must pay in full for uninsured services. Because benefit coverage is so narrow, total medical costs can be substantial: on average, patients' total out-of-pocket payments account for as much as 39.3 per cent of inpatient care expenses and 61.1 per cent of outpatient care expenses (table 8). Since fee regulation is applied only to insured medical services, health care providers have strong incentives to substitute uninsured medical services for insured ones to increase their net income. The rapid diffusion and use of high-cost medical technology not usually covered by health insurance present perverse financial incentives for medical suppliers to promote a wider spread of uninsured (and profitable) medical services.

Table 8. Out-of-pocket medical expenses, 1997 (percentage of treatment)

| Care | Services |  | Total |
| :--- | :--- | :--- | :--- |
|  | Insured | Uninsured |  |
| Inpatient | 15.7 | 23.6 | 39.3 |
| Outpatient | 36.9 | 24.2 | 61.1 |

Source: National Health Insurance Corporation, Internal Report, 1998

Despite the NHI programme, its role in the population's total health care expenditure is still limited. In 1998 the social insurance programmes related to health care (NHI, Medicaid, workers' compensation) accounted for only 42 per cent of total personal health care expenditure (Kang, 2000). The majority of personal health care expenditure (48 per cent) is borne by households through out-of-pocket payments.

The substantial amount of patients' out-of-pocket payments has called into question the fundamental purpose of health insurance - that of spreading the financial risks of the sick. To achieve better risk-spreading, it is proposed that the NHI increase insurance contributions, expand benefit coverage, and decrease the amount of out-of-pocket payments. The total health bill across the population could be expected to remain much the same because lower costs at the point of service would offset the increased cost of contributions. At the same time consumers' exposure to economic loss when ill would decrease. Furthermore, the health insurance data supplied by an expanded benefit package would provide valuable information to health policy-makers and enable them to better understand health care use, expenditure and provider behaviour.

However, convincing consumers of the benefits of increasing health insurance contributions if accompanied by an expanded benefit coverage has not been an easy task. Therefore, should the raising of insurance contributions not be feasible, it may be necessary to redesign the benefit package a) to allow for high-loss catastrophic illnesses with a low probability of occurrence, and $b$ ) to make increases in cost-sharing for minor cases. This may also be more effective in the effort to cope with patients' moral hazard problem. It is proposed that the NHI also adopt a stop-loss mechanism as a ceiling on patients' out-of-
pocket expenses. Rather than being solely designed with a regard for its impact on health insurance expenditure, the benefit package should take greater account of the costeffectiveness of medical interventions, the response of providers to benefit coverage design and the burden of costs to patients.

### 3.3 Financial distress

Fiscal stability is a serious concern for the national health insurance system in the Republic of Korea. The NHI as a whole has experienced a deficit since 1997 (table 9). All three types of health insurance have suffered from financial insolvency, with the exception in 1999 of a surplus in the health insurance for government and school employees thanks to the sharp increase in contributions from this sector (table 7 above). The total accumulated surplus of the national health insurance by the end of 1998 was not able to cover the half-year insurance expenditure of 1999.

Table 9. Fiscal Status of the National Health Insurance of the Republic of Korea, 1995-99 (in 1 billion Won)

|  | Year | 1995 | 1996 | 1997 | 1998 | 1999 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total revenue: | 5614 | 6631 | 7440 | 7995 | 8300 |
|  | Total expense: | 5076 | 6464 | 7681 | 8552 | 9167 |
| Industrial workers | Revenue | 2337 | 2704 | 2884 | 3038 | 3,121 |
|  | Expenditure of which: contributions | 1802 | ${ }^{2} 085$ | 2299 | 2220 | 2501 |
|  |  | 1992 | 2555 | 3112 | 3425 | 3696 |
|  | Surplus of which: benefit expenditure | 1494 | 1879 | 2143 | 2426 | 2920 |
|  |  | 345 | 149 | -227 | -383 | -575 |
|  | Accumulated fund | 2450 | 2608 | 2503 | 2262 | 1745 |
| Self-employed | Revenue | 2498 | 2983 | 3732 | 4204 | 4078 |
|  | of which: contributions | 1324 | 1576 | 2023 | 2155 | 2527 |
|  | Government subsidy | 755 | 872 | 995 | 1076 | 1166 |
|  | Expenditure | 2365 | 3017 | 3602 | 4077 | 4406 |
|  | of which: benefit expenditure | 2025 | 2545 | 2936 | 3401 | 3927 |
|  | Surplus | 133 | -34 | 129 | -157 | -328 |
|  | Accumulated fund | 967 | 817 | 886 | 728 | 400 |
| Government and school employees | Revenue | 779474 | 944 | 824 | 753 | 1101 |
|  | Expenditure of which: contributions |  | 514 | 556 | 1050633 | 1078 |
|  |  | 719 | 892 | 967 | 1050 | 1065 |
|  | of which: benefit expenditure | 503 | 652 | $-143{ }^{734}$ | 929 | 992 |
|  | Surplus | 60 | 52 |  | -320 | 36 |
|  | Accumulated fund | 702 | 580 | 397 | 77 | 113 |
| Total | Total surplus | 538 | 167 | -241 | -860 | -867 |
|  | Total accumulated fund | 4119 | 4005 | 3786 | 3067 | 2257 |
| Source: National Health Insurance Corporation, Health insurance statistics, various years. |  |  |  |  |  |  |
| Note: Total revenue also includes inter-society revenue (through the revenue sharing mechanism) and interest revenue from the accumulated fund. |  |  |  |  |  |  |

Ageing population, the increasing role of general and tertiary-care hospitals, and the rapid increase in the expenditure on pharmaceuticals and high-cost medical supplies, are important factors contributing to the health care cost inflation and the fiscal insolvency of the NHI. The insured are rapidly ageing and the proportion of the elderly (i.e., over 65 years of age) has risen from 5.1 per cent in 1991 to 6.3 per cent in 1999 (table 10). However, that proportion is over 10 per cent in the health insurance both for the self-employed in rural areas and for government and school employees. In addition to an elderly population, other driving forces of health care cost inflation are closely related to the perverse financial incentives for health care providers.

Table 10. Insured population over 65 years old for different groups, 1991-99 (in percentages)

|  | 1991 | 1993 | 1995 | 1997 | 1998 | 1999 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Govt. \& school employees | 7.9 | 8.2 | 8.6 | 9.2 | 9.6 | 10.1 |
| Industrial workers | 4.8 | 8.2 | 5.5 | 5.9 | 6.7 | 6.4 |
| Self-employed: Rural | 7.7 | 8.4 | 8.9 | 9.8 | 9.8 | 10.2 |
| $\quad$ Urban | 3.4 | 3.6 | 4.3 | 4.6 | 4.6 | 4.7 |
| $\quad$ Total | 4.7 | 4.8 | 5.1 | 5.4 | 5.4 | 5.5 |
|  |  |  |  |  |  |  |
| Total average percentage | 5.1 | 5.3 | 5.6 | 5.8 | 6.3 | 6.3 |

Source: National Health Insurance Corporation, Health insurance statistics, various years.

From 1990 to 1998 the average annual rates of increase in the expense per claim case for medical supplies and pharmaceuticals were 13.6 per cent and 11.4 per cent respectively, both of which are greater than the average annual rate of increase in total medical expense per claim case, i.e., 8.2 per cent (table 11). Before July 2000, physicians in the Republic of Korea both prescribed and dispensed drugs. Fees for physicians' services were strictly regulated while the compensation to providers for the use of pharmaceuticals and medical supplies was not. Providers purchased pharmaceuticals and medical supplies at much lower cost than the insurance reimbursement, and they had strong incentives to use more of them in treatment. The new policy of separating the prescribing and dispensing of drugs resulted in lengthy physician strikes in 2000 (Kwon, 2000c).

Table 11. Average annual rates of increase of expenses claimed for pharmaceuticals and medical supplies, 1990-98 (in percentages)

|  |  | Pharma- <br> ceutical <br> expenses | Medical <br> supplies <br> expenses | Basic <br> fee | Physician <br> service <br> fee | Total rate <br> of increase |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Inpatient |  |  |  |  |  |  |
|  | 1991 | 12.2 | 11.4 | 10.2 | 14.2 | 12.5 |
|  | 1992 | 10.8 | 10.2 | 9.2 | 12.5 | 11.1 |
|  | 1993 | 10.6 | 11.8 | 9.3 | 20.8 | 14.7 |
|  | 1994 | 9.6 | 10.6 | 8.5 | 17.2 | 12.8 |
|  | 1995 | 13.6 | 39.2 | 14.9 | 7.5 | 13.0 |
|  | 1996 | 12.0 | 28.2 | 13.0 | 7.0 | 11.5 |
|  | 1997 | 5.0 | 12.8 | 6.4 | -0.6 | 3.8 |
|  | 1998 | 6.3 | 15.8 | 0.5 | 4.2 | 5.4 |

Average annual rate of increase
(10.0) (17.1) (8.9) (10.1)
(10.5)

| Outpatient | 1991 | 15.0 | -0.2 | 3.1 | 3.1 | 6.2 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 1992 | 13.6 | -0.2 | 3.0 | 3.0 | 5.8 |
|  | 1993 | 11.3 | 5.5 | 2.4 | 3.0 | 5.5 |
|  | 1994 | 10.2 | 5.2 | 2.4 | 2.9 | 5.2 |
|  | 1995 | 7.9 | 12.9 | 8.8 | 13.2 | 9.9 |
|  | 1996 | 7.3 | 11.4 | 8.1 | 11.6 | 9.0 |
|  | 1997 | 7.8 | -5.2 | 4.2 | -7.9 | 1.3 |
|  | 1998 | 30.8 | 54.5 | -1.0 | 19.3 | 17.5 |
|  |  |  |  |  |  |  |
| Average annual rate of |  |  |  |  |  |  |
| increase |  |  |  |  |  |  |
|  | $12.7)$ |  |  |  |  |  |
|  | $19.9)$ | 6.0 | 4.7 | 7.3 | 8.2 |  |
| Total |  | 12.2 | 5.7 | 4.5 | 6.8 | 7.6 |
| (inpatient and outpatient) | 1992 | 8.7 | 5.5 | 2.5 | 7.2 | 6.2 |
|  | 1993 | 8.0 | 5.3 | 2.5 | 6.8 | 5.9 |
|  | 1994 | 9.7 | 29.5 | 10.3 | 10.4 | 11.0 |
|  | 1995 | 8.8 | 22.8 | 9.4 | 9.4 | 9.9 |
|  | 1996 | 6.5 | 6.9 | 4.5 | -5.0 | 1.9 |
|  | 1997 | 24.6 | 30.7 | 1.0 | 15.2 | 15.2 |
|  | 1998 | $(11.4)$ | $(13.6)$ | $(4.9)$ | $(7.1)$ | $(8.2)$ |

[^7]
### 3.4 Merger of health insurance societies

In October 1998, the health insurance society for government employees and teachers and the health insurance societies for the self-employed were merged to create the National Health Insurance Corporation (NHIC). In July 2000, the health insurance societies for industrial workers were merged into the NHIC, with the result that the national health insurance in the Republic of Korea now has a single insurer. However, the NHIC retained the separate insurance funds of government and school employees, industrial workers and the selfemployed. These insurance funds of industrial workers and government and school employees were merged in 2001, and in 2003 the new fund will be merged with the fund of the selfemployed. In that sense, a real single payer will emerge in 2003. However, difficulties involved in the assessment of income and contributions for the self-employed may present a critical barrier to the full integration of financing for employees and the self-employed.

Before the merger of the three health insurance societies in 2000, different methods of setting contribution levels were used. The contribution in self-employed groups depended on income, property and the number of dependents while income was the only basis for contribution in employee groups. The definition of earnings for contribution liability (contribution base) also differed in different insurance societies for industrial workers. For example, the contribution base in some insurance societies for employees included base salary only and others the total wage compensation (including bonus and work benefits). Differences in the method of setting contribution levels and in the amount of contributions paid, despite quite similar health care benefits received, have caused concern regarding the inequity of the economic burden of social health insurance.

Under the pluralistic health insurance system, members of the insurance societies in poor areas paid the contribution as a greater proportion of their income. Many regional health insurance societies in rural areas have experienced serious financial distress. The aforementioned revenue-sharing mechanism among insurance societies has not rescued those health insurance societies from financial insolvency because it was more of a structural problem. In rural areas, the population is ever decreasing and in poor health, and, in addition, the proportion of the elderly is increasing. Insurance societies in those areas have faced expanding health expenditure while their members' ability to pay is lower than in urban areas. Gaps between rich and poor insurance societies have got bigger and social solidarity has been threatened.

Before the recent merger, many health insurance societies were too small in size to pool the risks of their members efficiently. Consequently, they were quite vulnerable to financial shocks among their members. The bigger the insurance society, the greater its capability to spread risks, and hence a single payer should have the benefit of better risk pooling. However, due to the absence of competition, societies were not voluntarily merged in order to improve their risk pooling capacity, and consequently, many small insurance societies were not able to use economies of scale in management. Proponents of the merger have argued that the merger would have saved a lot of administrative costs to the NHI. For instance, in 1998, out of the three categories, the proportion of the administrative cost of the total expense was the smallest in the health insurance for government and school employees ( 4.8 per cent) -
which had a single insurance society - and the highest ( 9.5 per cent) in the health insurance for the self-employed (NHIC, 1998).

Self-governance of insurance societies has almost never been realized in the Republic of Korea. The ruling political party and the Ministry of Health and Welfare have had a great influence on the appointment of the CEOs of health insurance societies. Many of them were former military personnel, persons affiliated with the ruling party, and retired government bureaucrats. Health insurance societies were also subject to heavy regulation by the government. Consequently, there has been little avenue for members to participate in the major decision-making of their health insurance societies.

### 3.5 Private health schemes

Some maintain that the Government needs to encourage private health insurance to cover, for example, patient co-payment or patient use of medical services that are not included in the benefit package of public health insurance. Many private insurance companies sell indemnity-type health insurance that pays a lump-sum benefit to the insured on the basis of diagnoses or the number of in-patient days. If private health insurance were prevalent, however, the Government may be reluctant to expand the benefit coverage of the NHI, which is currently too limited to provide adequate financial protection against health risks. Private health insurance as a substitute for social insurance is not likely to be allowed due to a concern for social solidarity.

Private health insurance schemes may introduce two types of inequity. When private insurers use a more generous fee schedule for providers, a two-tier system of health care may result, and providers will be more inclined to give a better level of care to those with private insurance. In addition, the purchaser of private health insurance often uses more medical services than the purchaser of public health insurance because private insurance provides for patient co-payment. The better off who could afford to purchase private health insurance would thus consume more resources in the public health insurance system. Therefore health care provision to private and public insurees would become increasingly inequitable.

## 4 Organization of health care delivery

### 4.1 Health care providers

All health care institutions have entered into compulsory contracts with the insurer in which they have no choice but to treat the insured. This type of mandatory assignment of health care providers was inevitable when the supply of health care was not sufficient in the early stage of the NHI. Until recently, the health insurer has not owned health care institutions. In March 2000, the National Health Insurance Corporation opened a general hospital with about 700 beds in the suburbs of Seoul.

One of the most distinct features of health care delivery in the Republic of Korea is its heavy reliance on for-profit hospitals that, in most cases, physicians both own and manage. As
of 1998, almost 50 per cent of acute care hospitals are for-profit, 44 per cent are not-for-profit, and only 7 per cent are public (table 12). More than half of those not-for-profit hospitals are private corporate hospitals with a de facto physician owner. They are not-for-profit in legal terms, but behave as for-profit hospitals. This is because the Tax Law in the Republic of Korea does not allow for-profit corporate entities in health care. Many hospitals have originated from clinics with small inpatient facilities, which have been expanded by entrepreneurial physicians. Most private (both for-profit and not-for-profit) hospitals depend almost exclusively on patient care for their revenue without philanthropic donation and government subsidy. There is no difference for the health insurer in its dealings - for example, in fee schedules - with for-profit, not-for-profit or public hospitals. Public hospitals usually provide cheaper (uninsured) medical services and have a relatively greater share of Medicaid patients.

Table 12. Acute care hospitals and beds by ownership, 1998 (in figures, percentages)

|  | Public | Not-for- <br> profit | For- <br> profit | Total |
| :--- | ---: | ---: | ---: | ---: |
|  |  |  |  |  |
| Hospitals <br> (percentage) | $(7.4)$ | $(43.8)$ | $(48.8)$ | $(100.0)$ |
|  | 10680 | 101725 | 34964 | 147369 |
| Beds <br> (percentage) | $(7.2)$ | $(69.0)$ | $(23.8)$ | $(100.0)$ |

Source: Korea Hospital Association, Hospital List, 1999.
Note: 178 of 319 not-for-profit hospitals are private corporate hospitals, which are not-for-profit by law. For-profit private corporate hospitals are not allowed in the Republic of Korea.

Hospitals have a closed system and employ their own clinical staff. The proportion of outpatient care in hospitals in the Republic of Korea is much greater than that in other countries. Most office (clinic)-based physicians are Board-certified specialists, practising in their clinics with small inpatient facilities. Reimbursement to providers is by fee-for-service, and referral means a reduction in income for the referring providers. These unique characteristics relating to health care providers lead to fierce competition rather than coordination among physician clinics and hospitals. Patient referrals or networks of health care provision are rare, and wasteful competition results in duplication of facilities and equipment.

Consumers have a strong preference for large (usually tertiary or university) general hospitals. Consequently, general hospitals have expanded more rapidly than smaller hospitals and clinics. Neither demand-side financial incentives such as differential coinsurance rates, nor regulation such as the requirement for referral letters, seems to have solved the problem of large general hospitals being overcrowded with minor cases. The role of primary care physicians has been minimal and a system of gate-keeping by primary care doctors has been missing. Because most hospitals are intended for acute care, the NHI system is in need of longer-term care facilities, especially considering the current increase in the elderly population.

### 4.2 The payment system for health care providers ${ }^{10}$

### 4.2.1 Background

The national health insurance system in the Republic of Korea reimburses providers for their provision of medical care benefits by a fee-for-service system regulated by the Government. Under this fee-for-service system, medical suppliers have powerful incentives to provide more medical care and more profitable services (i.e., higher margins). Treatment intensity is increasing, as are costs, which are increasing faster than the regulated physician's fees. In order to avoid the effect of fee regulation, physicians substitute unregulated, uninsured medical services for the regulated insured services. Even though the NHI has expanded benefit coverage, the proportion of patients' out-of-pocket payment as regards their total medical expenses remains more or less same.

Differential profit margins derived from the provision of different medical services also encourage physicians to provide more of the services that attract higher margins, leading to a distortion in the mix of medical treatment for patients. For the Government, setting optimal prices for such a vast number of medical services is so difficult that uneven margins for medical services are inevitable under the fee-for-service payment. Distortion in the relative price of medical services affects the relative supply of medical specialties. Medical residency training for those specialties attracting greater profit margins draw a far greater number of applicants. Popular specialties include psychiatry, ophthalmology, and dermatology whereas radiology, thoracic surgery, and anesthesiology are unpopular.

### 4.2.2 Diagnosis Related Group (DRG)-based prospective payment

The Government launched a pilot programme of DRG-based prospective payment in February 1997 for 54 health care institutions. In the second year of the pilot programme (February 1998 to January 1999), 132 health care institutions voluntarily participated in the programme. The DRG-based payment covered five disease categories (cataract operation, tonsillectomy and adenoidectomy, appendectomy, cæsarean section, and normal delivery), with 29 DRG codes depending on the severity and age of the patient. It accounted for 18.6 per cent of inpatient cases. The criteria for selecting the disease groups for the pilot programme include lower variation in medical expenses, little disagreement among physicians on treatment methods, lower degree of uncertainty about treatment outcomes, high frequency of utilization, smaller proportion of uninsured services, and lower possibility of DRG creeping. The NHI set the level of the DRG payment higher than the comparable fees under the fee-for-service system in order to encourage the participation of health care institutions in the pilot programme.

The evaluation of the second year of the DRG pilot programme shows that providers have responded to the economic incentives of the DRG-based payment. Total medical care

[^8]expenses of the five disease categories in the participating institutions diminished by an average of 1.9 per cent after their participation in the DRG-based payment (table 13). For example, length of stay during hospitalization dropped by an average of 4.6 per cent. Lens procedure indicated the largest effect of the change in the payment system, with a 13.1 per cent decrease in medical expense and 18.9 per cent in the length of stay. In a regression analysis that controls for the types of health care institution, the pure effect of the DRG-based payment was to reduce medical expenditure by 3.4 per cent and the length of stay by 5.7 per cent (KHIDI, 1999). Savings in the administrative cost of claim reviews and the expedited reimbursement to health care institutions contributed to the satisfaction of participating institutions.

Table 13. Impact of DRG-based payment on volume and length of stay, 1998

|  |  | Percentage change before \& after <br> DRG 2nd -year pilot programme |  |
| :--- | :---: | :---: | :---: |
| Diagnosis | Number of <br> institutions | Medical expenses <br> per patient (Won) | Length of stay <br> (in days) |
| Lens procedures | 21 | -13.1 | -18.9 |
| T\&A procedures except <br> tonsillectomy/adenoidectomy | 11 | -1.2 | -10.3 |
| Tonsillectomy/adenoidectomy <br> (Age >17) | 14 | -10.5 | -10.8 |
| Tonsillectomy/adenoidectomy <br> (Age 0-17) | 24 | -5.8 | -11.0 |
| Complicated appendectomy | 7 | 9.6 | 13.3 |
| Simple appendectomy | 27 | -8.5 | -9.5 |
| Caesarean section | 39 | -2.3 | -4.2 |
| Vaginal delivery with |  | 16.7 | 11.6 |
| complications | 45 | -2.0 | -1.9 |
| Vaginal delivery |  | 1.9 | -4.6 |
| Average change |  |  |  |

Source: Korea Health Industry Development Institute, Evaluation of the second-year pilot program on DRG-based payment, 1999.

Table 14 shows that the DRG-based payment has significantly reduced the inpatient use of antibiotics (by an average of 16.0 per cent), with the largest impact in adenoidectomy ( 24.2 per cent) and appendectomy ( 17.5 per cent). However, the use of antibiotics after discharge increased except in vaginal deliveries. The DRG-based payment seemed to
encourage providers to substitute non-inpatient care for inpatient care in the use of antibiotics. The savings in the inpatient use of antibiotics ( 13,845 Won or US\$11) were greater than the subsequent increase in the cost of post-discharge use ( $4,241 \mathrm{Won}$ ). The incentive to reduce costs under the DRG-based prospective payment does not seem to harm the quality of services if measured by complications, re-operations, and mortality (KHIDI, 1999). The surgical procedures in the DRG pilot programme are not complicated ones and the rates of re-operation and mortality associated with them are generally low.

Table 14. Impact of DRG-based payment on the use of antibiotics: expenses of antibiotics per patient, 1998 (in Won)

|  | DRG-based <br> payment | Average | Lens <br> procedure | Adenoid <br> -ectomy | Append <br> -ectomy | Caesarian <br> Section | Vaginal <br> Delivery |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Inpatient | Before | 86974 | 99824 | 118038 | 165596 | 130709 | 20920 |
|  | After | 73129 | 88189 | 89510 | 136612 | 117383 | 18944 |
|  | Difference | -13845 | -11635 | -28528 | -28984 | -13326 | -1976 |
|  | (percentage) | $(-15.9)$ | $(-11.7)$ | $(-24.2)$ | $(-17.5)$ | $(-10.2)$ | $(-9.4)$ |
|  |  |  |  |  |  |  |  |
| Post- |  |  |  |  |  |  |  |
| discharge | Before | 11566 | 12323 | 22526 | 14111 | 3053 | 5816 |
|  | After | 15807 | 24127 | 25604 | 19383 | 5176 | 4744 |
|  | Difference | 4241 | 11804 | 3078 | 5272 | 2123 | -1072 |
|  | (percentage) | $(36.7)$ | $(95.8)$ | $(13.7)$ | $(37.4)$ | $(69.5)$ | $(-18.4)$ |

Source: Korea Health Industry Development Institute, Evaluation of the Second Year Pilot Program on DRG-based Payment, 1999.

The Government planned to implement the compulsory DRG-based payment covering nine disease categories for all health care institutions by July 2000. Physicians have obtained increased bargaining power through their strikes against the separation of prescribing and dispensing drugs and succeeded in pushing the Government to defer several health care reform measures including the payment system reform. It is now uncertain when the DRG-based payment system will be implemented.

### 4.2.3 Negotiation between the insurer and providers

In 2001, the NHI introduced fee negotiation between the insurer and health care providers. The Ministry of Health and Welfare used to set fees for medical services, and providers complained that this unilateral fee scheduling by the Ministry was unfair and made it difficult for them to get adequate compensation for services. The rate of increase in fees is greater than the consumer price index on a cumulative basis, although the former lagged behind the latter until mid nineties. Providers argue, however, that the Ministry of Health and Welfare set fees much below customary charges when health insurance was first introduced in 1977, meaning that even if the fee increase has followed the consumer price index, its level is still low because of the low starting level.

It is not yet clear how the negotiation mechanism works: for example, whether it should be based on fees or on expenditure (or on fees with a budget cap), and how the conflict resolution process should be managed. It seems timely to discuss the global budgeting approach by negotiating not only fees but also the health care budget or expenditure. The DRG prospective payment system still has weaknesses such as DRG creeping and the substitution of outpatient for inpatient care. With an adequate quality management policy, the budgeting system may not distort the optimal mix of health services in patient treatment, unlike the DRG-based payment system and the fee-for-service scheme. It is relatively easier to implement the budgeting mechanism in a single payer system like the NHI of the Republic of Korea than in a health care system with multiple financing sources.

Once the insurer and the provider association agree on the amount of the budget through bilateral bargaining, the provider association can be responsible for allocating funds among individual providers, monitoring their billing patterns, reviewing utilization, and sanctioning outliers - as in Canada and Germany. Current lack of differentiation between physicians' clinics and hospitals makes it difficult to implement separate budgets for outpatient and inpatient care in this country. Building mutual trust between providers and the insurer, and developing a culture of negotiation are indispensable to the introduction of global budgeting in the Republic of Korea.

### 4.2.4 Prerequisites for the payment system reform

As mentioned previously, providers have financial incentives to substitute health services that are not reimbursed by a regulated payment system for the range of services subject to it. Unless the payment system is applied to a comprehensive range of medical services, the aggressive payment system may eventually increase the economic burden of patients. In this respect, expanding the benefit coverage is a task that should precede a reform of the payment system in the Republic of Korea. An aggressive payment system can also lead to the under-provision of necessary services, and it is recommended that the insurer put more resources into monitoring and improving the quality of services and patient outcomes. Therefore, the implementation of innovative payment systems should be supported by an effective information system - for example, for the purposes of an expanded patient database, a system of disease classification, statistics of health care utilization and expenditure, cost of services, financial performance of health care institutions, etc.

## 5 Concluding remarks

It took only 12 years for the Republic of Korea to extend its social health insurance to the entire population since its first introduction to employees in large corporations in 1977. Before the transformation into a single insurer in July 2000, the national health insurance in the Republic of Korea was founded on more than 350 quasi-public health insurance societies for the three different employee categories of government employees and teachers, industrial workers, and the self-employed. The Government's policy of a rapid extension of health insurance made unavoidable a policy of low contribution levels and limited benefit coverage.

Consequently, current social insurance for health care accounts for less than 45 per cent of personal health care expenditure in the Republic of Korea. Furthermore, for-profit health care institutions are the dominant form of health care providers, and there is far less involvement by the public sector in health care delivery than in the financing of health care.

National health insurance in the Republic of Korea, undergoing radical changes, is standing at a crossroads. The Government initially chose to adopt an approach of pluralistic health insurance societies because of its policies of incremental extension of health insurance and of minimizing the amount of Government financing. In the last few years, concerns regarding both the inequity in health care financing between employment categories and the fiscal deficit of health insurance for the self-employed led to a fundamental change in the structure of the national health insurance system in the Republic of Korea. All health insurance societies were merged into one in July 2000 to enhance the capacity of risk pooling. By 2003, the three original insurance funds pertaining to the three employment categories will have been united into a single payer. However, the effect of structural change on the efficiency and equity of the national health insurance has been largely inconspicuous till now. The difficulty of assessing the self-employed's ability to pay contributions remains a critical challenge for the Government in achieving equity in health insurance financing and setting a nationwide uniform contribution schedule under a single insurer system. Reforming the tax system and improving income assessment methods for the self-employed are crucial tasks for the social insurance system in the Republic of Korea.

According to the experience of the Republic of Korea of extending health insurance, separating employees and the self-employed and first covering employees seemed initially unavoidable because it is easier to assess and collect contributions from employees. For employees, health insurance based on employment or employer mandate has been an easier way to extend coverage. It has been more challenging to extend health insurance to the selfemployed not only because of the considerable difference in earnings but also because of the difficulty of assessing and collecting contributions. Facing resistance from the self-employed, the Government had to subsidize their insurance contributions, although this cannot be compared theoretically with an employer's sharing of employee contribution. Nevertheless, it is certain that the Government subsidy contributed to the smooth extension of health insurance to the self-employed in the Republic of Korea.

In a sense, the rapid extension of health insurance was possible in the Republic of Korea because it was under an authoritarian military regime where a strong Government was able to implement policy with little recourse to social consensus. Political factors and economic constraints prompted the Government to apply a pluralistic approach in health insurance governance. However, in spite of being useful for incremental extension, a health insurance system with multiple insurance societies can be plagued by the differential financial capacity of these societies, which in the long run can threaten the fiscal sustainability and equity of the entire system. Fiscal instability is more likely when insurance societies are not big enough to facilitate risk pooling. Mergers among insurance societies may thus become inevitable. The economic and political environment of a country determines whether merges of insurance societies will result in a 'single' insurer system as now exists in the Republic of Korea.

## References

Kang, S. 2000: National Health Expenditure in the Republic of Korea, Master's thesis, School of Public Health, Seoul National University (Seoul, Republic of Korea) (in Korean).

Kim, Y. 1989: "The development of health insurance in the Republic of Korea," in Health and Society Council (ed.): Social security for health care in the Republic of Korea: For the movement toward the people's right to health care (Seoul, Republic of Korea), pp. 99-120 (in Korean).

Kwon, S. 2000a: "Health care financing and delivery for the poor in the Republic of Korea", in International Review of Public Administration (No. 2), pp. 37-45, (Seoul, Republic of Korea).

Kwon, S. 2000b: "The payment system reform for health care providers in the Republic of Korea", in Proceedings of the Kyoto University (Japan)-Seoul National University (Republic of Korea) Joint Symposium, pp. 213-234 (Seoul, Republic of Korea).

Kwon, S. 2000c: "Physicians' strikes and the separation of prescribing and dispensing drugs in the Republic of Korea", in Proceedings of the Korean Association of Policy Studies, pp. 77-93 (Seoul, Republic of Korea).

Kwon, S. 2001: "Economic crisis and social policy reform in the Republic of Korea", in International Journal of Social Welfare (No. 2), pp. 97-106 (Oxford, United Kingdom).

Korea Hospital Association 1999: Hospital list (Seoul, Republic of Korea) (in Korean).
Korea Health Industry Development Institute (KHIDI) 1999: Evaluation of the second-year pilot program of DRG-based payments, (Seoul, Republic of Korea) (in Korean).

Ministry of Health and Welfare 1999: Internal report, (Seoul, Republic of Korea) (in Korean).
National Health Insurance Corporation (NHIC) 1998, 1999, 2000: Internal reports, (Seoul, Republic of Korea) (in Korean).

National Health Insurance Corporation (NHIC) various years: Health insurance statistics, (Seoul, Republic of Korea) (in Korean).

Shin, Y., et al. 1999: The increase in health insurance expenditure and policy options, Korea Institute of Health and Social Affairs (Seoul, Republic of Korea) (in Korean)


[^0]:    ${ }^{1}$ Mr. Soonman Kwon is Associate Professor at the School of Public Health at Seoul National University, Republic of Korea.

[^1]:    ${ }^{2}$ Helpful comments from Clive Bailey, Wouter van Ginneken and Barbara Rohregger are gratefully acknowledged.

[^2]:    ${ }^{3}$ See Kwon (2000a) for a discussion on the major issues in the Medicaid programme in Korea.

[^3]:    ${ }^{4}$ Workers who work for industrial employees' insurance societies.

[^4]:    5 Among the 142 health insurance societies for industrial workers, 60 societies were based on a single (large) corporation. Groups of small companies that were located in the same geographic region formed the remaining 82 insurance societies.

[^5]:    ${ }^{6}$ The NHIC (National Health Insurance Corporation) reviews claims before providing compensation to physicians and hospitals. In some cases, the amount of compensation is cut as a result of the review.
    ${ }^{7}$ In the case of private school teachers, the insured, the owner of the school and Government pays 50 per cent, 30 per cent, and 20 per cent of the contribution respectively. This is an implicit government subsidy to private schools.
    ${ }^{8}$ They become eligible to their health insurance benefit as soon as they pay past dues of contribution.

[^6]:    ${ }^{9}$ As an exception, the insurer pays a cash benefit for delivery at non-health care institutions (e.g. home).

[^7]:    Sources: Ministry of Health and Welfare, Internal Report, 1999;
    Shin, Y., et al., The increase in health insurance expenditure and policy options, Korea Institute of Health and Social Affairs, 1999.

[^8]:    10 For a detailed analysis of the payment system reform for health care providers in the Republic of Korea, see Kwon (2000b).

