EQUITAP Working Paper #20:

Comparative desk-review of social health insurance experiences

in

Japan, Korea, Taiwan and Mongolia

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Chapter 1

Overview

1. Introduction

This desk review is a subcomponent of the Regional Research Initiatives on Social Protection project funded by Ford Foundation, which aims to provide a comparative assessment of the social health insurance experiences of Japan, Taiwan, South Korea and Mongolia. Major expansions of social health insurance in four Asian countries, Japan (in 1961), South Korea (in 1989), Mongolia (in 1994) and Taiwan (in 1995) in the direction of universal coverage for the past few decades, have not been adequately documented or evaluated, but will offer significant relevant experience to Asian countries with large rural or informal sectors. Japan, closely modeling after German system, is the first Asian country to achieve universal coverage in 1961, through expansion of social insurance programs. South Korea, also adopting a multiple-payer social insurance system initially, implemented a similar model as Japan, in 1989. As both Japan and South Korea are member states of OECD, descriptions and assessment of their social protection systems are relatively well documented and disseminated in international publications, compared to Taiwan and Mongolia. The Mongolian experience has particular relevance to many transition countries, as it was able to establish wide coverage with social insurance despite having a significant rural population including the nomad cattle breeders, but it is one which is barely known in the rest of the region. The Taiwanese experience is the most significant expansion of social health insurance in the past decade, but political factors prevent its experience being widely shared. As there is an absence of a tradition and mechanism for Asia-wide collaborative work introspectively examining national health systems from a comparative perspective, and the lack of the comparative data to support it, this report is set forth to provide a comparative assessment of the social health insurance experiences of the abovementioned four countries.

In addition to the display of the detailed country-specific reports of social insurance systems, this report will also present a comparative analysis of the system characteristics in benefit coverage, financing mechanisms, delivery system and equity performance. The comparative study will focus on relative ability of the various national systems to ensure effective access to health services for the poor, the relative distribution of the financing burden across groups, the ability of each system to protect the poor from catastrophic health expenditures, and the extent to which redistribution and risk pooling occurs within systems. The organization of this report is as follows: Chapter 1 presents an overview and concludes with a summary of observations to address issues such as coverage expansion to the poor population and the role of the government in financing health care. The country-specific reports prepared by

individual country representatives are displayed in Chapter 2, South Korea, Chapter 3, Taiwan and Chapter 4, Mongolia. The data for Japan presented in the summary table is mainly abstracted from OECD Health Data 2004, literature review (Ikegami and Campbell, 2004; Ikegami, 2005), and an interview with Dr. Shuichiro Hayashi at Harvard School of Public Health.

2. Overview of the system characteristics

Table 1 summarizes the development and system characteristics of the universal social health insurance programs in Japan, South Korea, Taiwan and Mongolia.

2.1 Country characteristics

In terms of economy size, except for Mongolia (whose GDP per capita per year is US$450), Japan, South Korea and Taiwan are classified as high-income economies (with GDP per capita per year more than US$12,000). Japan, the country with the largest population of 127.4 million people and the strongest economy power among the four, devoted the largest GDP share, 7.8% to health care, surpassing an average of 6% of South Korea, Taiwan and Mongolia. It has also demonstrated a fairly good health outcome, as evidenced by the commonly adopted health indicators, infant mortality rate and life expectancy (Table 1).

2.2 Universal health insurance program

Japan is the first country to implement a universal social insurance program in 1961, which is closely modeling after German's social health insurance pillar, followed by South Korea in 1989, Mongolia in 1994 and Taiwan in 1995. The common characteristic of the social insurance schemes shared by Japan, South Korea and Taiwan lies in the employment-based feature. The universal coverage was achieved through the expansion of then existing employment-based social insurance programs. The Japanese social insurance program currently covers 99% of its population through two major insurance systems, Employees' Health Insurance system (EHI) and Citizens' Health Insurance system (CHI); and the remaining 1% is covered by local means-tested social welfare program for the low-income households.

South Korea, operating a multiple-payer system when it first inaugurated its National Health Insurance (NHI) program in 1989, has consolidated its roughly 370 insurance programs into one single insurance fund in 2000 and provides coverage to 97% of the South Korean population with 3% of the population covered by a medical assistance program for the poor, Medicaid.

The single-payer NHI program in Taiwan, introduced in 1995, is currently covering 99% of the population with government subsidizing the premiums for the poor, veterans and farmers (the remaining 1% is mainly overseas Taiwanese, fugitives, migrant workers from aboriginal village, illiterate marginal poor, i.e. people can not be tracked down).

In contrast with the other three countries which have a long-standing history of social insurance programs, Mongolia made a dramatic shift from a tax-funded national service system to the social insurance model in 1994 as a result of the fundamental socio-economic and political reforms in early 1990s. The reform consequently caused financial crisis and shortages in government revenue that severely diminished health sector funding and the introduction of a social insurance model was regarded as an effective mechanism to mobilize new financial resources for health care. The Mongolian single-payer health insurance system, currently covering 78% of its population, is mainly composed of two programs, a compulsory social insurance program for the employed, and low-income and vulnerable population and, a voluntary program enrolling the unemployed who have the capability to work. The uninsured Mongolians, which currently accounts for 22% of the population, are mainly the unemployed (those did not enroll in the voluntary scheme), and nomads and students (who dropped out of the insurance program as a result of a new government policy which reduced the premium subsidies to this group).

2.2.1. Benefit Coverage

All four social insurance schemes offer coverage (to a varying extent) for inpatient service and ambulatory services (except for Mongolia whose insurance scheme only covers prescription drugs as all the ambulatory care services are provided free of charge, regardless of the insurance status, directly through a tax-funded delivery system). Except for Mongolia, all the other three systems do not have a formal referral mechanism to guard use of services and people have complete freedom of choice for providers. Basic measures of preventive medicines, such as vaccination, are usually provided directly by government health departments. The NHI schemes in Taiwan and South Korea, also offer some physical check-ups and for the former, pap smear and mammography.

2.3. Financing Schemes

All four countries studied collect premiums based on wage income, and the contribution rates range from an averaging of 8.2% (for Employee's Health Insurance) in Japan, 6% in Mongolia, 4.55% in Taiwan, and 3.94% in South Korea, respectively. The employers and the employees contribute equal share to premium, except for

Taiwan, where the share borne by the employers varies by the insured status (60% for labor workers and 65% for government employees).

Mongolia is an exception case in terms of financing mix. The recent Mongolian National Health Account (NHA) estimates, which release estimates for the household direct payment for the first time, have shown that social insurance expenditures take up only 29% of total health expenditure (THE) and the government is the largest payer, accounting for 43%. Japanese insurance schemes contribute to 65.4% of total financing source, followed by 51.78% in Taiwan and 43.5% in South Korea. Obviously the private insurance sector still plays a very modest role in financing health care in these four countries. Taiwan currently has the largest private insurance share, which is approximately 9% of THE, compared to 2.2% in South Korea and even to a lesser extent, 0.3 % in Japan. Despite that the universal coverage is rendered by the social insurance system, the households in South Korea still pay for 37.3% of THE out of pocket, 30.15%, 28% and 16.9% in the cases of Taiwan, Mongolia and Japan respectively. Except for Japan, the direct payment share appears higher than those of Germany and the Netherlands which are commonly cited social insurance systems among OECD countries (OECD, 2004).

As social insurance model essentially centers on the notion of social solidarity, it deserves examining the risk pooling mechanism among these four countries. It appears that given the single-payer mechanism embedded, South Korea, Taiwan, Mongolia, all have a common risk pool for risk sharing among the insured. Japan, as managing a multiple insurers system, the risk pooling mechanism is operated through cross-subsidization among the insurance plans based on the number of elderly people (aged 70 and above) in each plan. In addition, the governments of the four countries studied subsidize the premium contributions, to different extent, for specific disadvantaged groups, mainly low-income group. Essentially, Japanese government subsidizes 50% of the insurance expenditures for the Citizens' Health Insurance plans (in the form of premium subsidies) and accounts for 35.7% of the total NHI revenues in 2002 (including premium subsidies, but not as an employer). In contrast, the South Korean government, to a lesser extent, is only responsible for 19.5% of total NHI revenues (including contributions as an employer). The shares borne by the government in the form of subsidies for Taiwan and Mongolian governments are 28.3% and 20%, respectively.

2.4 Delivery System

Japan, South Korea and Taiwan all demonstrate a mix (more toward dominantly private) of ownership of medical institutions, in particular for Japan and South Korea where more than 80% of hospital beds are in the private sector. In contrast, as

Mongolia made this dramatic shift from a tax-funded system to a social insurance model, it is naturally to observe this dominant public ownership which has been kept intact since the health care reform in 1994. As hospitals with large outpatient care centers competing with clinic-based physicians for patients is a common phenomenon, and the average insured consumes more than 8 visits to the Western doctors in Japan, South Korea and Taiwan, a relatively larger proportion of NHI expenditures devoted to outpatient services would be observed. Mongolia is an exception for its modest percentage of total NHI expenditures on outpatient services, which can be attributable to the government-funded outpatient services for its citizens (regardless of the insurance status), leaving the insurance only pay for the prescription drugs in outpatient episodes.

Services rendered to the insured are invariably subject to a uniform fee schedule, with a varying degree of co-payment requirement (dependent upon types of medical institutions for South Korea, Taiwan and Mongolia and age groups for Japan) and caps on the total co-payment, set by the respective social insurance programs in each country (Table 1). In the case of Japan, the fee schedule is also applicable to the services rendered to the recipient of its social welfare program (rough 1% of the Japanese population), where services provided to the people covered by Medicaid program (accounts for approximately 3% of the South Korean population) are subject to a different set of rates set by the South Korean government.

All the four countries have ventured into various stages of payment reforms, albeit fee-for-service is still the most popular mode of payment. The trend has been to experiment with DRG (Diagnosis-Related Groups) type of case-basis reimbursement. In April 2003, Japan's eighty main university-affiliated hospitals and two national centers (for cancer and cardiovascular disease) initiated a new patient grouping experiment, Diagnosis and Procedure Combinations (DPCs), which differs from U.S. DRG/PPS system in that fees for DPCs are per diem (Ikegami, Campbell, 2004). Taiwan, starting in 1995, has gradually expanded a DRG-prototype case payment method to include 50 specific treatment procedures and conducted a capitation payment experiment at the remote islands. In addition to the diversified payment methods, in order to make ends meet, Taiwan's NHI also gradually phased in global budgets for dental services (in 1998), Chinese medicine services (in 2000), primary care provided at clinics (in 2001) and hospitals (in 2002). The Mongolian social insurance scheme reimburses hospitals on a prospectively set budget which is based on expected utilization rates and rate per admission and the physicians on a FFS basis (for services not provided by the public-funded system), as well as pays the family practitioners on a capitation basis which is age-and-sex adjusted. In contrast, the South Korean system mainly still pays the providers following the traditional FFS

payment base, despite an earlier successful experience from piloting DRG payment method, which eventually was blocked from a full-fledge implementation by the strenuous physician strikes in 2000.

To avoid the perverse incentive to overuse and discriminate against patients according to their ability to pay, essentially all the insurance programs have invariably established stipulation to disallow balance billing, except for Japan (to a very limited extent which allows the providers at tertiary care institutions to charge some extra physician fees to keep the physicians' income at a competitive rate). For a similar reason, the insurance programs, to varying degrees, also prohibit the providers from extra billing uncovered services. Taiwan represents the most stringent case of disallowing extra billing practice, which essentially prohibits all providers from rendering both covered and uncovered services in the same visit, i.e., either the providers see the patient as a self-pay patient (hence the patient pays all) or as a NHI insured (who then pays nothing but the standard co-payment). In contrast, South Korea and Mongolia allow practitioners to extra-bill patients for uncovered services within the same utilization episode. The extent of extra billing practice in the Japanese system lies between that of the two extreme cases, which permits the providers to extra bill patients for uncovered services specifically listed in the "specified medical costs"(SMC) provision (Ikegami, 2005).

2.5 Equity in financing

Kakwani index is employed to measure the financial equity performance of the health care systems in Japan, South Korea and Taiwan (data not available for Mongolia), in terms of assessing the distribution of financing sources in proportion to the income distribution (for details, please refer to O'Donnell et al, 2005). The overall equity in financing appears mildly regressive for Japan, South Korea and Taiwan and this is commonly observed for social insurance systems. South Korea shows pronounced regressivity in social insurance payout and appears to be the only one which demonstrates mild progressivity in direct payment which is attributable to its significant share of out-of-pocket expenditures borne by the households. In contrast, regressivity in household direct payment on health is detected for both Japan and Taiwan, and the former appears to have a much stronger magnitude. Taiwan is the only country which has reported data on private health insurance coverage and it is progressively distributed.

2.6 Financial Risk Protection

South Korea and Taiwan are the only two countries in this study, which report assessment of financial risk protection, by way of catastrophic and poverty impact.

In the case of South Korea, in terms of the catastrophic impact of the expenditure on health care, 21 per cent of the households spend more than 5 per cent of consumption expenditure on health care, and 10 per cent (6 per cent) of the households spend more than 10 per cent (15 per cent). The incidence of the catastrophic payment tends to concentrate on the poor when the threshold level is set at 5 percent, and then it shifts in a pro-rich direction when the thresholds are set at 10 per cent and 15 per cent. Similar conclusions can be derived from the analysis of the poverty impact of health care expenditure. When the poverty line is set at the third (1/3) of average daily expense (relative poverty line), 5.1 per cent of the households are below the poverty line before spending on health care, which increase to 5.2 per cent after the health spending. When the poverty line is set at the minimum expense of living (national poverty line), the proportion of the below-the-poverty-line households increases from 10.8 per cent to 12.5 per cent which implies that household expenditure on health care to some extent has resulted in the impoverishment of households.

Taiwan's NHI covers a comprehensive package of services, including all medical and laboratory services, dental care, drugs, Chinese medicine and herbal drugs, and home nurse visits. The 10 per cent co-insurance for hospitalization is capped at 6 per cent of the average national income per person for each admission and at 10 per cent for each calendar year. Poor households are exempted from paying all the cost-sharing. In short, the population covered by NHI is well protected against uncertain large medical expenses, other than long-term nursing home care. Nonetheless, this 30 per cent share of NHE by household direct payment is comparably higher than most of the advanced economies which have adopted social insurance schemes to achieve universal coverage. Examining the catastrophic impact of household direct payment on health, it was found that NHI has also improved the burden of catastrophic payment. In 2000, fewer than 20 per cent of the households (compared to 24 per cent in 1994) spent more than 5 per cent of household consumption expenditures on direct payment on health, and less than 4 per cent of the households spent more than 15 per cent. It signifies the reduction in spending share (direct payment as a percentage of total household expenditure) on health as a result of the introduction of the NHI program. In addition, much less proportions of households fall below the pre-defined threshold level in 1995 compared with that in 1994. Furthermore, the incidence and intensity of the catastrophic payment shift to a pro-rich direction as a result of NHI program across all threshold levels, that is, it tends to fall on the worse-off in 1994, but the direction is reverted in 1995. Finally, a reduction in poverty impact is observed when assessing the household direct payment on health using official poverty lines as the threshold level.

2.7 Equity in utilization

Adopting the horizontal equity principle, which is often translated as "equal treatment for equal need", researchers have employed the index of horizontal inequity developed by Wagstaff and van Doorslaer (2000), which measures deviation in the degree to which health care is distributed according to need (proxied by self-assess health status and health limitation), to examine the income-related inequality and inequity in health care utilization. Again, South Korea and Taiwan are the only two countries in this study, which report assessment of equity of health care utilization based on the index of horizontal inequity (for details, please refer to Lu, Leung, Kwon, et al, 2005).

South Korea appears to show equitable if not pro-poor distribution of outpatient visits and number of inpatient days- or less inequitable compared with other OECD countries. Pro-poor inequitable health care utilization after controlling for medical care needs is somewhat unexpected as out-of-pocket payment at the point of service is rather high in South Korea. Despite the fact that the poor utilize a greater quantity of medical care compared with the well off, the rich spend more on medical care, resulting in the pro-rich inequitable distribution of medical care expenditures. It is the result of the high out-of-pocket payment with many services uncovered by health insurance. It is likely that different socio-economic groups utilize different 'types' of medical care: the relatively poor use more of insured services whereas the relatively better-off use more of uninsured services, resulting in the greater health care expenditure by the better-off in spite of the greater quantity of medical care utilized by the poor.

Taiwan shows that the better-off were more likely to use outpatient services (controlling for need), but quantities of Western doctor and dental visits were evenly distributed while there is a pro-rich bias in the number of LTMP episodes. ER visits and inpatient admissions were either proportional or slightly pro-poor. The results indicate a pro-poor distribution of utilization for services that are more extensively covered by NHI, such as hospitalization, western allopathic physician visits and emergency visits. Standardization for differences in need shifts all distributions in a pro-rich direction, as would be expected given the socio-economic determinants of health. For services with somewhat limited NHI coverage (such as dental, traditional healer, and Chinese medicine practitioner visits), the distribution tends to be pro-rich.

3. Conclusion

This section concludes with a summary of observations of these four systems, addressing specific issues of the expansion of coverage, the role of government in financing, and how the poor is covered under the current scheme.

First, coverage expansion.

The social insurance programs in Japan, South Korea and Taiwan, are deeply rooted in employment-based insurance schemes. Hence, universal coverage is achieved through the gradual expansion of coverage to specific employment population, and then eventually reaching out to the disadvantaged population, such as the unemployed, and the low income households. Japan, being the first nation to implement a German model of social insurance program in 1961 in Asia region, has imposed pronounced impacts on the insurance system development in South Korea and Taiwan. South Korea first built upon its then existing insurance programs to achieve the goal of universal coverage in 1989, but decided to merge roughly 370 insurance programs into one single insurance fund in 2000. Nonetheless, there was only one uniform fee schedule to which the multiple insurance programs were subject. Taiwan has determined to operate its national insurance program on a single-payer basis since its planning phase, by way of carving out the health insurance components of its then existing three social insurance programs into one single administration and also extending coverage to the uninsured. Evidence has shown that the single-payer system in Taiwan was able to produce direct savings through market power and manage the expenditure growth to a reasonable extent.

Mongolia is a very interesting example in its dramatic shift from a tax-funded system to a social insurance model due to financial concerns. In the first two years, nearly 96% of the population was covered by health insurance on a compulsory basis. However, the population coverage has been on the decline (from 96% in 1996 to 78% in 2003) which can be attributed to two major reasons, one is the value of insurance not widely perceived by the public as the benefits package is limited to inpatient services (the ambulatory care is still mainly funded by the government); and the other being the gradual exclusion of students and nomads from the government subsidy which consequently results in their dropping out of the insurance program. Maintaining a near universal coverage has been the top priority for the Mongolian government.

Second, the role of government in financing health care.

Judging from the share of NHI expenditures funded through general revenues, principally in the forms of premium subsidies and direct funding, the government still plays an insignificant role in financing health care and administering the program through quasi-government agencies (albeit South Korean government provides subsidies to a lesser extent). In particular, Mongolian government remains as the major funding source for ambulatory care through direct funding. To mobilize the funding sources more effectively and make the social insurance program more viable,

Mongolian government has proposed to expand the insurance benefit package to cover ambulatory services and somewhat lessen the role of government in direct funding the services.

Third, how the poor was covered.

Taiwanese and Mongolian government provide no differential treatment to the poor by including the poor into the national insurance pool and provide full premium subsidies to the low income population, and the former also provides partial premium subsidies to the marginally poor (including people in frictional unemployment). In contrast, Japan and South Korea actually carve out the poor to be covered by a separate social welfare program; nonetheless, disparity in how the recipients are treated compared to the insured exists.

In the case of Japan, nearly 1% of its population is the recipients of the government-funded social welfare program; however, the providers are subject to the national uniform fee schedule for the services rendered to this group. In essence, the recipients are no different from any of the insured and the social welfare program can be seen as just another insurance program which is fully funded by the government. In South Korea, the Medicaid program covers approximately 3% of its population who are entitled to almost the same level of health care benefits as the NHI insured. However, the reimbursement arrangement for the services provided to this group differs from those to the NHI insured which are on FFS basis, such as fixed payment for mental care, per-visit payment for physician visits and per diem for inpatient care. The fact that Medicaid pays a lower fee (than the NHI fee schedule) and often delayed payment for services delivered to the Medicaid recipients created perverse incentives for the providers to discriminate against this disadvantaged group (although there is no delay in payment now). . Meanwhile, the Medicaid program is facing chronic fiscal instability. The separation of the vulnerable population from the rest of the insured is likely to reinforce the socioeconomic barriers to access to care.

For details regarding the social insurance experiences of South Korea, Taiwan and Mongolia, please refer to Chapter 2 to 4.

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Table 1 The development and system characteristics of the universal social health insurance programs in Japan, South Korea, Taiwan and Mongolia

Characteristics	**Japan**	**South Korea**	**Taiwan**	**Mongolia**
Country characteristics in 2003				
Population size	127.4 m	48.1 m	22.5 m	2.5 m
GDP per capita (US$)	31,181 (2002)	15,916 (2001)	12,726	450
NHE as % of GDP	7.8 (2001)	5.9 (2001)	6.26	6
Health exp per capita (US$)	2,558 (2001)	931 (2001)	808	25
Infant mortality rate (per 1,000 live births)	3.0 (2002)	5.4 (2001)	4.9	23.5
Life expectancy	M:78.3 (2002) F:85.2 (2002)	M: 72.8 (2001) F: 80.01 (2001)	M: 73.3 F: 79	M: 60.8 F: 66.5
Universal Health				

Characteristics	**Japan**	**South Korea**	**Taiwan**	**Mongolia**
Insurance program				
Year of implementation	1961	1989	1995	1994
Coverage schemes before universal social insurance was introduced	Mainly employment-based insurance programs	Mainly employment-based insurance programs and tax –based financing for the poor	Mainly employment-based insurance programs and a fully subsidized low-income household insurance	Tax-funded National Health Service type
NHI Administration	**Multiply payers** Two major insurance systems: Employees' Health Insurance system and Citizens' Health Insurance system, each with its own claim review and reimbursement agent (non-for-profit independent agents)	**Single-payer (National Health Insurance Corporation,** which merged roughly 370 insurance programs in 2000)	**Single-payer (Bureau of National Health Insurance)**	**Single-payer (Social Health Insurance Agency)** Two programs: compulsory social health insurance program (for the employed, low income and vulnerable population), voluntary health insurance
Supplementary programs in addition to compulsory soc. ins program	Yes, social welfare program for the low-income household (means tested).	Medical Aid for the poor	No	Voluntary health insurance program for the unemployed who have the capability to work
Current % of population	99	97	99.9	78

Characteristics	**Japan**	**South Korea**	**Taiwan**	**Mongolia**
coverage rate (soc ins)				(73%: compulsory plan; 5%: voluntary plan)
The uninsured	1%, covered by the social welfare program	3%, covered by Medical Aid for the poor	Overseas Taiwanese, fugitives, aboriginal people migrating into cities, marginal poor (illiterate)	Unemployed who have capability to work, some nomads and students
Benefit Coverage				
Ambulatory services	Yes	Yes	Yes	Limited (only prescription drugs; all the ambulatory care services in the public sector, directly funded by the government, are rendered free of charge to all)
Inpatient services	Yes	Yes	Yes	Yes
Choice of providers	Yes	Yes	Yes	Yes
Referral mechanism	No	Limited: higher copayment in the case of direct visit to tertiary care hospital (outpatient)	No	Yes (strictly enforced, no reimbursement if not referred)
Cash benefits	No	Yes, limited	No	No
Physical check-up	No	Yes	Yes	No

Characteristics	**Japan**	**South Korea**	**Taiwan**	**Mongolia**
Prevention, health promotion	No (but, large firm-based insurance plans may cover)	Yes, limited.	Yes, limited (such as pap smear, mammography, but not vaccination which is paid by the government).	No
Services not covered	Vaccination, organ transplantation, new high-tech services	Private bed, some high-tech services, elective plastic surgery, meals, eyeglasses	Private bed, very limited high-tech services, elective plastic surgery, meals, eyeglasses, prosthetics	Elective plastic surgery, eyeglasses (selected infectious disease fully funded by the government)
I. Financing				
Premium base	Wage income	Wage income (income and property for the self-employed)	Wage income	Wage income
Current contribution rate (% of wage income)	It varies by insurance schemes (avg 8.2% for EHI)	3.94 (2003)	4.55	6
Financing mix in 2000	Government: 15.9 % Soc. Ins: 65.4 HH direct payment: 16.9% Priv. insurance: 0.3 Other pri: 1.5%	Government: 10.9% Soc Ins: **43.5**% HH direct payment: **37.3**% Priv. insurance: 2.2% Other pri: 6.1%	Government: 8.84% Soc Ins: **51.78**% HH direct payment: **30.15**% Priv. insurance: 8.9 Other pri: 0.33%	Government: **43**% Soc Ins: 29% HH direct payment: **28**%
Risk pooling	Across the insurance plans	Common risk pool	Common risk pool	Common risk pool

Characteristics	Japan	South Korea	Taiwan	Mongolia
	based on the no. of elderly people (70+) in the plan (cross-subsidization)			
Government subsidies	50% of the premium contribution for the Citizens' Health Insurance insured (50% of the insurance exp)	Partially subsidize the self-employed group (administrative costs and partial premium contribution for the lower income group)	Government pays for all the operating expenses of NHI; subsidize 10% of the premium for the labor workers; subsidize premium fully for the low-income households, veterans and military service personnel	Full premium subsidy to the low income and vulnerable population
Total government outlay as a % total NHI revenues (including subsidies to premium contribution, but not as an employer)	34.7% (2002)	19.5% (including premium contributions for government employees)	28.3%	20%
II Delivery				
Hospital beds (private: public)	Dominant private sector 82:18	Dominant private sector 85:15	Mixed ownership 65:35	Dominant public sector 10:90
Ratio of inpatient exp to	40:60 (2002)	27:73 (2001)	34:66	97: 3

Characteristics	Japan	South Korea	Taiwan	Mongolia
outpatient exp (under soc ins program)				(out-patient exp only covers OPD prescription drugs)
Uniform fee schedule	Yes (for all insurance schemes, even for social welfare program)	Yes (not applicable to Medical Aid group)	Yes	Yes (both compulsory and voluntary health insurance)
Payment mechanism	Ambulatory care: FFS Inpatient services: FFS for acute beds; per diem for chronic beds (80 main hospitals and two national centers have been experimenting a Diagnosis and Procedure Combinations (DPCs) payment base, similar to DRG/PPS system, but on a per diem basis)	FFS	Mainly FFS; capitation for remote island experimental sites; case payment method (prototype of DRG) for selected 50 treatment procedures; quality-based FFS is experimented on selected disease types; separate global budget for Chinese medicine, dental services, primary care clinics, and hospitals.	Hospital: prospectively set budget based on utilization rates and rate per admission. Limited FFS for physician visits (not covered services) and capitation for family practitioners.
Copayment	Yes 20%, 30%, 10% (dep. on age groups, 0-2, 3-69, 70+)	Yes 30-55% for outpatient visits (depending upon type of institutions); 20% for inpatient	Yes $5-8 for outpatient visits (depending upon type of institutions);	Yes $0.36-0.72 for outpatient visits (depending upon type of institutions);

Characteristics	Japan	South Korea	Taiwan	Mongolia
		services.	10% for inpatient services	10-15% for inpatient services 50% of prescribed medicine
Cap on copayment	Yes, cap varies depending upon age and income level	Yes ($2,500 for six months)	Yes Only on inpatient services, per adm(per year): 6% (10%) of average national income per capita.	No
Balance billing	Yes, very limited (physician fees at tertiary care institutions, most of the case)	No	No	No
Extra bill for uncovered services	No, not in the same visit, except for services specified in the specified medical costs (SMC).	Yes	No	Yes
III Assessment				
Equity in financing (Kakwani index) in 2000	Overall: -0.0688 (1998) Soc ins: -0.0415 Direct payment: -0.2691	Overall: -0.0239 Soc ins: -0.1634 Direct payment: 0.0124	Overall: -0.0292 Soc ins: -0.0749 Direct payment: -0.078 Private ins: 0.2053	NA

Characteristics	Japan	South Korea	Taiwan	Mongolia
Financial risk protection				
Poverty impact		No significant poverty impact (World Bank standard)	No significant poverty impact (World Bank standard)	NA
Catastrophic impact		21% of household spent more than 5% of consumption exp on health	Less than 20 % of household spent more than 5% of consumption exp on health	NA
Equity in utilization				
	NA	CI: pro-poor; HI: pro-poor (less)	CI: pro-poor HI: pro-rich Standardization shifts all distributions in a pro-rich direction)	NA

Source: this summary table is compiled by J.R. Lu, based on the country reports prepared by S. Kwon (S. Korea), D. Bayarsaikhan (Mongolia), J.R. Lu (Taiwan), Ikegami and Campbell (2004), OECD Health Data 2004 and an interview with Dr. Shuichiro Hayashi.

Chapter 2

Social Health Insurance Experience in South Korea

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Abstract

Korea introduced social health insurance first for employees in large corporations in 1977, which was incrementally extended to workers in small firms and the self-employed until it finally achieved the universal coverage of population in 1989. However, government's priority on rapid extension made unavoidable a policy of low contribution levels and limited benefit coverage. Out-of-pocket payment at the point of service is rather high, and the public sector accounts for less than 55 per cent of total health care expenditure in Korea. Medicaid program, a tax-based financing for the poor, covers 3-4 per cent of the population. Health care financing is regressive, favourable for the rich, when measured by Kakwani index. Distribution of health care utilization in terms of the numbers of outpatient visits and inpatient days is slightly inequitable and favourable for the poor, but health care expenditure, as a measure of the quality of medical care utilized, is pro-rich and inequitable. Health insurance contributes to financial risk protection, and household expenditure on health care does not result in the substantial impoverishment of households. In health care delivery, for-profit health care institutions are the dominant form of health care providers, who are paid by the fee-for-service. More active involvement of the public sector in health care financing and delivery will contribute to the better protection of the poor, which calls for the increase in contribution, extension of benefit coverage, reduction in out-of-pocket payment, and increased funding to the Medicaid program. Payment system reform for providers to sustain the long-term fiscal viability of the NHI is also an imminent challenge.

1. Introduction

With export-driven economic planning in the 1960s and 1970s, the Republic of Korea (South Korea) achieved rapid economic development. It became a member of the OECD in 1996. In 2003 the GNI (Gross National Income) per capita was 15,070,000 Korean Won (12,646 USD). The population of Korea is 48-million in 2004. Infant mortality rate per 1000 live births in 2001 was 5.4, while life expectancy at birth was 80.01 for women and 72.84 for men for the same year. Cardiovascular diseases, cancer and accidents are three major causes of death in Korea. Life expectancy in 2010 has been forecasted as 77 on average, 73.3 for men and 80.7 for women.

The proportion of the elderly (persons over 65) in Korea was about 8 per cent in 2003, but it is forecasted to increase at an unprecedented rate. By 2010, the proportion of the population over 65 years of age is estimated to be 10.7 per cent, 22.5 per cent by 2030 and 34.4 per cent by 2050, resulting in an old-age dependency ratio of 14.8 per cent, 35.7 per cent and 62.5 per cent, respectively. If this trend continues, as of 2000, it will take less than 20 years to double the proportion of the elderly. Rapid aging in Korea is driven not only by the increased life expectancy, but more so by a sharp decline in fertility. Total fertility rate was 1.17 in 2003. Rapid ageing will increase health care expenditure and has a huge implication for the social security system in Korea, particularly in the era when rapid economic growth is no longer expected.

2. Health Care System

Historical Developments

The Health Insurance Law was enacted in December 1963, but the law eliminated mandatory insurance coverage due to the country's weak economic and social infrastructure, and social insurance for health care was not actually implemented until the mid-1970s. 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). The Government began to recognize the importance of a welfare system, and the Fourth Economic Development Plan placed emphasis on social development, aiming to distribute the fruits of economic development to workers. 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 program for the poor (Medicaid) also started in 1977). In 1979, health insurance was extended to government employees and teachers and to those working in corporations with more than 300 employees. Over time, it was incrementally extended to smaller firms. For the purpose of extending health insurance to the self-employed, the Government implemented a pilot program in three rural areas in 1981, and in one urban area and two additional rural areas in 1982. The health insurance program achieved universal population coverage by covering the rural self-employed in January 1988 and the urban self-employed in 1989.

Both economic and political factors contributed to the rapid extension of health insurance to the self-employed, the last group to join the NHI (Kwon, 2002). First of all, the booming economy of the late-1980s substantially improved the ability of the self-employed to pay for social insurance. The economy 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 for the health insurance for the self-employed.[1] 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 impending 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 include the self-employed in the NHI.

Health Care Financing

Structure of National Health Insurance

As the result of the merger of all insurance societies in 2000, the national health insurance in Korea is a single payer. Before the merger, there were three types of social health insurance schemes: 1) Government employees and teachers and their dependents (10.4 per cent of the population and with a single insurance society); 2) Industrial (including white-collar) workers and their dependents (36.0 per cent of the

[1] Contrary to the rather smooth extension of health insurance to industrial workers, its extension to the self-employed faced tough resistance. 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. Government responded to the farmers' protests by providing a health insurance subsidy for the self-employed.

population and with about 140 insurance societies); 3) The self-employed (50.1 percent of the population with about 230 insurance societies), the so-called regional health insurance.[2] Poor population is covered by a separate tax-based welfare program. Since the government set the statutory benefit package, there was no difference in the statutory benefit coverage between social insurance societies. Before the recent merger, each insurance scheme consisted of nonprofit insurance societies -about 350 societies in total, which were quasi-public agencies and subject to strict regulation by the Ministry of Health and Welfare. Each insurance society covered a well-defined population group, and beneficiaries were assigned to insurance societies based on employment (industrial workers) and residential area (self-employed).

Contribution and Benefit Coverage

For industrial workers and government and school employees, employees and employers shared the premium contribution equally. Before the financing reform of the merger in 2000, the average contribution rate was 5.6 per cent (of wage income) for government and school employees, and 3.75 per cent for industrial workers with a range of 3.0 per cent to 4.2 per cent depending on the insurance society (subject to the approval by the Ministry of Health and Welfare). Because reliable information about the incomes of the self-employed was only partially available, the contribution formula in health insurance for the self-employed consisted of both income and property (e.g., house, automobile).

The government provided subsidy only to the insurance societies for the self-employed, covering administrative costs and a part of the premium contributions of the lower income group. Before the merger of health insurance societies into one in July 2000, the revenue sharing mechanism for risk pooling (the so-called fiscal stabilization fund) reallocated revenues across insurance societies, taking account of the catastrophic expenses and the proportion of the elderly in each insurance society. The health insurance societies for the self-employed were the major beneficiaries of the revenue sharing mechanism, although it did not solve their problem of fiscal instability. For insured medical services, the insured pays 20 per cent of the medical expenses in case of inpatient care. For outpatient care, there are differential co-payment rates depending on the types of health care institutions (clinics, hospitals,

[2] Workers in small firms with less than six employees are included in this insurance scheme.

tertiary-care hospitals), ranging from 30-55 per cent. In addition to co-payments for insured medical services, the patient pays in full for uninsured services (e.g., ultrasonogram, MRI, meals at inpatient care); this amount can be substantial due to the stringent benefit coverage. On average, the patients' total out-of-pocket payment accounts for as much as 35 per cent of inpatient expense (19 per cent for co-payment for insured services and 16 per cent for full payment for uninsured services) and 65 per cent of outpatient expense (31 per cent and 34 per cent for the above categories, respectively) in Korea (NHIC, 2002a). In 2004, the stop loss mechanism was introduced and the ceiling is set at $2,500 for six months.

Medical Aid Program for the Poor

Tax-based Medicaid program, separated from the national health insurance, covers the poor, who do not pay any contribution. As a part of the general welfare program, Medicaid program covers 3-4 per cent of the population, of which financing is shared by the central government (80 per cent) and the local government (20 per cent)[3]. The only exception is Seoul where the city government pays 50 per cent (instead of 20 per cent) of the fund because as a capital city, its fiscal capability is much greater than that of other local governments. Local governments are responsible for the administration of the Medicaid program. Social workers at regional government offices play a key role such as reviewing applicants, evaluating income/property/living conditions, selecting beneficiaries, providing support services, and doing follow-up of beneficiaries, etc.

Medicaid beneficiaries are entitled to almost the same level of health care benefit coverage (types of services covered) as the NHI. For Medicaid type 1 beneficiaries, there is no co-payment for the insured services that the NHI provides coverage for, while Medicaid type 2 patients should pay co-payment, which is similar to that under the NHI.[4] However, Medicaid patients should pay full charge for uninsured services, and the financial burden of Medicaid patients can be substantial. Medicaid program

[3] The number of beneficiaries of the Medicaid programme varies over the years depending on the fiscal capability of government and on the number of the poor, which in turn hinges on the overall economy of the nation. See Kwon (2000) for a discussion on the major issues in the Medicaid programme in Korea.

[4] About half of Medicaid beneficiaries are type 1.

pays for mental care based on the fixed reimbursement: per-visit payment for outpatient care and per-diem payment for inpatient care. Consequently, providers have perverse incentives to increase the length of stay (LOS) of inpatient mental care. Medicaid program reimburses providers on the fee-for-service basis for medical services other than mental care. The fee is slightly lower than that the national health insurance (NHI) adopts.

Due to the stringent criteria for eligibility and limited benefit coverage, the Medicaid has often failed to provide the poor with sufficient protection against illness. Delayed payments to health care providers by regional governments sometimes have led to discrimination against Medicaid patients, deteriorating their access to medical care. Despite the decrease in the program's coverage of population, health care expenditure of the Medicaid program has exploded, resulting in the chronic fiscal instability of the program. High health care expense in mental and long-term care of Medicaid patients also contributes to the cost inflation of the Medicaid program.

Merger of Health Insurance Societies and the New Single Payer System

In 2000, all (social) health insurance societies were merged into one single national health insurer. Inequity in health care financing and the financial distress of many health insurance societies for the self-employed were major driving forces behind the reform (Kwon, 2003a). Before the merger, the contribution from self-employed groups depended on income, property and household size while income was the only basis for contribution in employee groups. Differences across insurance societies in the method of setting contributions and the resulting horizontal inequity caused concerns about the unfair burden of social health insurance.[5] For members of the insurance societies for the self-employed in poor areas, the burden of the contribution as a proportion of their income was greater than for those in wealthy regions.

Many of regional health insurance societies in rural areas experienced serious

[5] There also existed a difference in health care utilization across different insurance groups –the highest in public and school employee groups and the lowest in self-employed groups (Kwon, 2003d). The differences resulted from differences in age structures such as a larger proportion of those over 70 among the dependents of government and school employees, and those between 20-29 among industrial workers. Financial barriers and the regional maldistribution of health care personnel and medical facilities also had a negative effect on health care utilization by the self-employed in rural areas.

financial distress. In rural areas, the population is ever decreasing and in poor health, and the proportion of the elderly is increasing. Insurance societies in those areas faced expanding health expenditure while their members' ability to pay was lower than in urban areas. Before the merger, many health insurance societies were too small in terms of the number of enrolees to pool the financial risks of their members efficiently. Consequently, they were vulnerable to financial shocks from illnesses of their members. Many small insurance societies were not able to utilize the economy of scale in management either.

Health Care Delivery

Organization of Health Care Delivery

Health care delivery in Korea relies heavily on private hospitals that, in most cases, physicians both own and manage. More than 90 per cent [85 per cent] of acute care hospitals [beds] are private. Public hospitals also have a relatively greater share of Medicaid patients. The proportion of outpatient care in hospitals in Korea is much greater than in other countries. Most office (clinic)-based physicians are board-certified specialists, and those in the area of surgery even have small inpatient facilities. Since these clinics and hospitals perform similar functions and reimbursement to providers is by fee-for-service, there is competition rather than coordination among physician clinics and hospitals. There is no formal gate-keeping or networks of health care provision, and wasteful competition results in duplication of facilities and equipment.

Payment Systems for Health Care Providers

Health care providers in Korea are reimbursed by a regulated fee-for-service system since the beginning of the national health insurance. Besides the increase in volume and intensity of services, differential margins from different medical services also induce physicians to provide more services with higher margins (i.e., over-priced services). In order to avoid the effect of fee regulation, physicians substitute uninsured medical services, of which fees are not regulated, for insured ones (Kwon, 2003b). To tackle these problems, the government implemented a pilot program of DRG-based payment for selected disease categories to voluntarily participating health care providers. The evaluation of the DRG pilot program showed that providers responded to the economic incentives of DRG-based payment (Kwon, 2003b).

Medical care expenses and the length of stay in health care institutions declined following their participation in the DRG pilot program. The DRG-based payment also reduced the use of antibiotics and the number of tests in inpatient care. Pilot programs have shown that the DRG-based payment has not had a negative effect on quality measured by complication and re-operation. Physician strikes against the policy of separating drug prescribing from dispensing succeeded in blocking the government plan to implement DRG payment for all providers (Kwon, 2003c).

3. Health System Performance

Health Expenditure

In 2003, Korea spent 6.0 per cent of GDP on health care. Although this percentage is low compared with other OECD countries, it is partly due to Korea's rapid GDP growth rather than low health care expenditure. Since the growth of GDP in the future will not be as high as in the past, the proportion of GDP spent on health care is expected to increase. Despite the national health insurance program, the role of social insurance in health care financing is still limited in Korea. Taxation and social insurance related to health care (NHI, Medicaid, workers' compensation) accounts for only 54 per cent of total health expenditure (Table 1). A high proportion of health care expenditure, 37 per cent, was borne by households through out-of-pocket payments.

Fiscal stability and cost containment is of big and imminent concern for the national health insurance system in Korea. National health insurance as a whole has experienced a deficit since 1997, but an accumulated surplus delayed fiscal crisis until 2001, by which time it was in an almost bankrupt situation. An ageing population, little incentive for physicians to provide cost-effective care under the fee-for-service system, and increasing demand for health care have contributed to the continuing trend of health care cost inflation. A recent hike in physician fees by more than 40 per cent following physician strikes against pharmaceutical reform was a critical blow to the deteriorating fiscal health of the NHI. Temporary increase in government subsidy, which is mainly from the health promotion fund from tobacco tax, to the health insurance helped rescue the NHI from the fiscal crisis. In the long run, changing financial incentives for providers to practice in a cost-effective way will be the most important factor for health care cost containment, and so payment system reform is urgently required.

Equity in Health Care Financing

When measured by Kakwani index, health care financing is regressive overall in Korea (Yang, Kwon, Lee, et al., 2003). The good news is that the degree of regressivity decreases over time, and the progressivity of the direct tax in particular has been improving very rapidly (Table 2). Social health insurance is very regressive, more than in Germany and the Netherlands, although its regressivity decreases over the years. The regressivity of the social insurance is the result of the upper limit on insurance contribution and the difficulty in income assessment of the self-employed .Indirect tax turns out to be almost proportional, in contrast to its regressivity in other countries, because of a large share of the special luxury tax that is levied on luxury items that the well off consume. Out-of-pocket payment is progressive because the high out-of-pocket payment makes medical care more commercialized and hence the consumption of medical care depends on income -higher socio-economic groups spend more on medical care than the worse off do. Therefore, when out-of-pocket payment is very high in health care, progressivity of the out-of-pocket payment does not necessarily mean a pro-poor redistribution.

Financial Risk Protection

In terms of the catastrophic impact of the expenditure on health care, 21 per cent of the households spend more than 5 per cent of consumption expenditure on health care, and 10 per cent [6 per cent] of the households spend more than 10 per cent [15 per cent] (Lee, Yang, Kwon, et al., 2003). The concentration index of headcounts is negative when the threshold level is 5 per cent, but it turns into positive when the thresholds are 10 per cent and 15 per cent, implying that higher expenditure on health care out of total consumption expenditure may not necessarily have a catastrophic impact on households. Similar conclusions can be derived from the analysis of the poverty impact of health care expenditure. When the poverty line is set at the third (1/3) of average daily expense (relative poverty line), 5.1 per cent of the households are below the poverty line before spending on health care, which increase to 5.2 per cent after the spending. When the poverty line is set at the minimum expense of living (national poverty line), the proportion of the below-the-poverty-line households increases from 10.8 percent to 12.5 percent, implying that household expenditure on health care results in the impoverishment of households to some extent..

Equity in Health Care Utilization

When measured by HIwv index based on the difference between the concentration indices of actual medical care utilization and health care needs, utilization of outpatient care –number of outpatient visits- in Korea seems equitable (favourable for the poor) or less inequitable compared with other OECD countries (Kwon, Yang, Lee, et al., 2003). Health care utilization in terms of the number of inpatient days is equitable for the poor too (Table 3). Pro-poor inequitable health care utilization after controlling for medical care needs is a bit unexpected because out-of-pocket payment at the point of service is rather high in Korea. However, one needs to examine health care expenditure to take into account the differential quality or intensity of medical care utilization between different socio-economic groups. Despite the fact that the poor utilize a greater quantity of medical care compared with the well off, the rich spend more on medical care, resulting in the pro-rich inequitable distribution of medical care expenditure. It is the result of the high out-of-pocket payment with many services uncovered by health insurance. It is likely that different socio-economic groups utilize different 'types' of medical care: the relatively poor use more of insured services whereas the relatively rich use more of uninsured services, resulting in the greater health care expenditure by the rich in spite of the greater quantity of medical care utilized by the poor.

4. Summary and Policy Recommendations

The main strategy of extending health insurance in the Republic of Korea has been first to make insurance mandatory for employees in the industrial and public sectors, and then to extend coverage to the self-employed. Health insurance for employees was based on workplaces, and for the self-employed it was based on regions (before the merger of all insurance societies in 2000). 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). In 1979, health insurance was extended to government employees and teachers and to those working in corporations with more than 300 employees. Over time, it was incrementally extended to smaller firms. The health insurance programme achieved universal population coverage by covering the rural self-employed in January 1988 and the urban self-employed in 1989. The booming economy of the late-1980s

substantially improved the ability of the self-employed to pay for social insurance, and the Government had the fiscal capacity to provide a subsidy for the health insurance for the self-employed.

In spite of the rapid achievement of universal coverage of population, government's priority on rapid extension made unavoidable a policy of low contribution levels and limited benefit coverage. Consequently, the public sector accounts for less than 55 per cent of personal health care expenditure in Korea. Health insurance still contributes to financial risk protection, and household expenditure on health care does not result in the substantial impoverishment of households. Nonetheless, health care financing and utilization of medical care is not very equitable and not favourable for the poor. Although the poor are covered by the tax-based Medical Aid program without contribution payment, the eligibility is very stringent, resulting in the coverage of only 3-4 per cent of total population and discrimination of Medicaid patients because of delayed payment to providers. The financial burden on Medicaid beneficiaries can be still high because they should pay in full for services that are not covered by NHI. More active involvement of the public sector in health care financing and delivery will contribute to the better protection for the poor.

To achieve better risk spreading, the national health insurance should increase the insurance contribution, expand benefit coverage, and decrease the level of out-of-pocket payments in health care utilization. The total expected expenditure for the insured would not change much because the decreased payment at the point of service would offset the increased contribution. At the same time, consumer exposure to risk of economic loss when ill would decline. With the increase in insurance contribution, financial support for the poor who cannot afford to pay a contribution should be strengthened, which calls for the increased funding to the Medicaid program. When contribution increases, accurate assessment of income (of the self-employed) will be more important, which is a critical challenge for the social insurance system in Korea, and reforming tax administration is an urgent need (Kwon, 2001).

Fee-for-service has contributed to the perverse financial incentives of health care providers, health care cost inflation and the recent huge fiscal deficit of the NHI. For fiscal sustainability of the NHI, it is necessary to reform the payment system toward a DRG-based prospective payment or global budgeting to cap total health care expenditure. However, payment system reform efforts would likely encounter considerable resistance from the medical profession. They would be likely to pose

strong opposition to it with their superior financial and information resources as in the case of physician strikes in the recent pharmaceutical reform (Kwon and Reich, 2005). The Korean government needs to carefully carve out a strategic plan for payment system reform, including how to deal with provider opposition.

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Table 1: Public-Private Mix in the National Health Expenditure

	Government	Soc. Insurance	Public Total	Household	Priv. Insurance	Others	Private Total
1989	8.40%	24.70%	33.00%	58.30per cent	2.90per cent	5.70per cent	67.00per cent
1991	7.90%	26.20%	34.10%	57.70%	2.80%	5.40%	65.90%
1993	8.10%	27.00%	35.10%	55.70%	2.90%	6.30%	64.90%
1995	9.70%	28.40%	38.10%	52.20%	2.60%	7.10%	61.90%
1997	10.50%	32.90%	43.40%	47.40%	2.50%	6.60%	56.60%
1999	11.60%	34.20%	45.90%	44.60%	2.70%	6.80%	54.10%
2000	11.10%	36.50%	47.60%	43.00%	2.90%	6.50%	52.40%
2001	10.90%	43.50%	54.40%	37.30%	2.20%	6.10%	45.60%

Source: OECD, OECD Health Data 2004.

Table 2: Progressivity in Health Care Financing (Kakwani Index) in Korea, 1996-2000

Source: Yang, B., S. Kwon, et al. (2003).

Year	Direct tax	Indirect tax	General tax	Social insurance	Total public	Direct payments	Private insurance	Total private
1996	0.1719	0.0447	0.1120	-0.2166	-0.0994	n.a.	-0.0166	-0.0518
1997	0.1933	0.0358	0.1153	-0.2298	-0.1073	n.a.	-0.0067	-0.0524
1998	0.2414	0.0068	0.1365	-0.2121	-0.0913	n.a.	0.0093	-0.0406
1999	0.2635	0.0272	0.1441	-0.1840	-0.0739	n.a.	0.0070	-0.0324
2000	0.2683	0.0379	0.1559	-0.1634	-0.0600	n.a.	0.0124	-0.0239

Table 3: Equity in Health Care Utilization

	Unstandardized Cm	HIwv standardized for age and sex	
		Self Assessed Health*	Chronic Diseases and Self Assessed Health
Number of Outpatient Visits	-0.106	-0.011 (Cn: -0.096)	-0.002 (Cn: -0.104)
Number of Inpatient Days	-0.187	-0.168 (Cn: -0.019)	-0.162 (Cn: -0.025)
Medical Care Expenditure	0.016	0.058 (Cn: -0.042)	0.064 (Cn:-0.048)

*: 5 scale
Source: Kwon, S., B. Yang, et al. (2003).

Table 4: Characteristics of National Health Insurance and Medicaid in Korea 2003

Characteristics	**National Health Insurance**	**Medical Aid for the Poor**
1. Scheme nature model	Social Health Insurance	Social Welfare
2. Population coverage	All population except the poor	Poor people
Population (10 thousand)	4,700	140
% of total population in 2004	97.0	3.0
3. Benefit package		
Ambulatory services	All	All
Inpatient services	All	All
Choice of provider	Free	Referral line
Cash benefit[1]	Yes	Yes
Conditions included	All	All
Conditions excluded	No	No
Maternity benefits	Yes	Yes
Annual physical check-up	Every two years	No
Prevention, health promotion	Limited (vaccination not included)	Limited (vaccination not included)
Services not covered	Private bed, some high-tech care (e.g., sonogram), meals, eyeglasses, home care, etc.	Private bed, some high-tech care (e.g., sonogram), eyeglasses, home care, etc
4. Financing		
Source of funds	Insurance contribution and general taxation	General taxation

Characteristics	**National Health Insurance**	**Medical Aid for the Poor**
Financing body	National Health Insurance Corporation, Ministry of Finance and Economy	Ministry of Finance and Economy, Local governments
Payment mechanism	Fee for service	Medical care: fee-for-service; Mental care: per visit for outpatient, per diem for inpatient
Co-payment	Yes	No for type 1 patients; Yes for type 2 patients
Expenditure per capita (Korean Won)[2]	317,135 Won (US$ 302.3)	1,489,587 Won (US$ 1,418.65)
Tax subsidy per capita[3]		-

Note:

1.Maternity care, funeral expenses, prosthesis for the disabled, etc.

2.Health insurance expenditure per insured for National Health Insurance; Medicaid expenditure per program beneficiary for Medicaid. In other words, it is the expenditure paid by the insurer (NHI) or government (Medicaid), not including out-of-pocket payment. 1 USD is comparable to 1,050 Korean Won.

3.No reliable data available yet.

Chapter 3

Social Health Insurance Experience in Taiwan

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Abstract

Taiwan has achieved the goal of universal coverage for its 22.5 million Taiwanese citizens in 1995, by dint of implementing a compulsory social health insurance program. National Health Insurance (NHI) provides a comprehensive benefit package to its insured with co-payment requirement at the point of service. The National Health Insurance (NHI) administration, Bureau of NHI, operates a single-payer system with a uniform payment schedule and claim filing system, managing an annual budget of roughly 10 billion US dollars.

Assessing the system performance, it appears that household direct payment remains a significant share (30 per cent) of National Health Expenditure, compared to most of the advanced economies that adopt the social insurance scheme as the major financing source. However, no significant poverty impact as a result of the household direct health payment is observed. The significant share can well be a shift in consumption pattern. In terms of financial protection for the poor, the NHI program exempts low income households from premium contribution and co-payment requirement. In respect of the overall distribution of the financial burden, the total payment is rather proportionally distributed, with a Kakwani index of -0.02979. Examining access to care for all the essential medical services (hospital admissions, visits to western medicine practitioners, and emergency services), a pro-poor distribution of use rates is observed, although standardization for differences in need expectedly shifts all distributions in a pro-rich direction. Nonetheless, the magnitude of pro-rich distribution (after standardization) is pretty modest and the poor seems to have fair access to care.

In response to the financial distress faced by NHI, the call for premium restructuring has arisen. The issue of quality of care also needs to be addressed in face of stringent control over health care expenditures. Although, the equity in medical utilization rates has demonstrated a positive impact of NHI in improving access to care in aggregate, a further examination into specific disadvantaged groups will warrant the success of the program. Given the significant magnitude of household direct payment as a percentage of NHE, further research on the consumption pattern of this growing self-payment consumer group will effectively shed light on the prospect of the private health service industry.

1. Introduction – country profile

Taiwan is located in the Western Pacific between Japan and Philippines, off the southeast coast of China. With a total land area of about 36,179 square kilometres, the size of the Netherlands, and a population of 22.5 million people, Taiwan is one of the most densely populated countries in the world. The majority of the population live in several metropolitan areas (70 per cent of the land is mountains and forests, and thus most people live in the lowlands). After more than two decades of rapid economic growth, Taiwan became an advanced economy and its Gross National Product (GNP) per capita reached US $13,000 in the late 1990. Despite the world-wide recession in the past few years, Taiwan recorded its GDP at US$ 290.6 billion and US$13,157 for GNP per capita in 2003 (CEPD, 2004).

Taiwan went through an epidemiological transition from 1950 through 1980. Infectious disease dropped sharply and chronic illnesses increased. Now, its leading causes of death are cancer, stroke, and heart diseases, along with accident and diabetes. The most recent data (2003) shows that although other preventable causes of death have all declined drastically, accident remains entrenched as the fifth leading cause of death. Accidental injuries and deaths will remain a serious problem in Taiwan with the rising number of motorcycles and automobiles on congested streets and highways. By year 2003, the life expectancies at birth of the average Taiwanese men have reached 73.3 years, from 53.1 years in 1950, and for women 79 years, from 55.7 in 1950. Among other health indicators, infant mortality is 4.9 per thousand live births, which is comparable to the average of developed countries (Department of Health, 2003).

2. The health care system

National Health Insurance program

Taiwan adopts a single-payer approach in administering the National Health Insurance program, which was implemented in 1995 and has provided universal coverage for its 22.5 million citizens. The Bureau of National Health Insurance (BNHI), a quasi-governmental agency which by law is the only administration that operates the insurance program, manages an annual budget of roughly 10 billion US

dollars. NHI is one of the most importance social programs to date and has consistently enjoyed an average of 70 per cent of public satisfaction rate (DOH, 2000). With a nearly 100 per cent of coverage rate, NHI has a profound impact on the service delivery market and the formation of health policy.

Financing schemes

Before the introduction of the National Health Insurance program in 1995, Taiwan had three separate major social health insurance programs: Labour Insurance (implemented in 1950), Government Employee Insurance (implemented in 1958), and Farmers' Insurance (formally phased in 1989 after a four-year demonstration period) (Table 1). Figure 1 depicts the expansion of population coverage from 1950 to 2001. They covered approximately 56.8 per cent of the total population with Labour Insurance being the largest, covering about three quarter of the total insured population (Lu, Hsieh, 2000). Most workers in the formal sector were covered, but their dependents were not. All government employees, along with their spouse and parents were covered. Unfortunately, most of the high-risk population - elderly, disabled, and low-income persons – were left out from the three insurance programs. They had similar benefit packages that covered outpatient visits, hospitalization, diagnostic tests, and prescription drugs. Chinese medicine, dental care, eyeglasses, and home nursing visits were essentially excluded. The cost sharing provision was modest, and other than a fixed registration fee for outpatient visits, there was no other cost sharing under the three insurance programs (only spouse and retired government employees were required to pay 10 per cent of drug expenses).

Each of the three insurance programs was supervised by different government agencies. Each program separately contracted selected providers as participating providers, and paid them on a fee-for-service basis, but with different payment rates. Patients would be reimbursed for their medical expenses only if they have received the services from the participating providers.

To finance the benefits, Labour Insurance relied on the premium calculated as a per cent of workers' payroll which employers and employees shared 80 per cent and 20 per cent, respectively. Government Employee Insurance also relied on the premium, calculated as a per cent of workers' payroll which the employer and employee shared at 65 per cent and 35 per cent, respectively. Farmers' Insurance also had two financing

sources; 30 per cent from the insured, and 70 per cent from the central and local governments.

NHI was established by merging the existing social insurance programs (only health insurance components)[6] and expanding the coverage to the uninsured, mainly the unemployed, the elderly and the young. The government had decided to rely on premium based on the payroll with the government subsidizing the poor[7], veterans, and farmers. The government also allotted a reserve fund for NHI at its inauguration and would pay for the annual operating cost which is approximately 2 per cent of its total expenditures (Bureau of National Health Insurance, 2002). In other words, the collected premiums are only used to cover the medical expenditures incurred. It recognized that a premium based on workers' payroll might have some temporary negative impacts on supply and demand for labour. But it was also judged that the positives of NHI out-weighted this negative.

The premium, calculated as a per cent of total payroll was to be shared between employers, employees and the government, at the rate of 60 per cent, 30 per cent, and 10 per cent, respectively. To avoid the possibility that employers may discriminate against workers with large families, the employers would only have pay for the worker plus 0.78 dependent, if the worker has any dependent to be covered. The worker has to pay the premium for himself/herself plus up to three dependents. Nevertheless, this method of imposing a premium per insured penalizes workers with large families or/and with surviving unemployed parents. Recent statistics show that 65 per cent of the employees pay for themselves only, 12 per cent pays for self plus one dependent, 11 per cent pays for two dependents, and 12 per cent pays for three (Bureau of National Health Insurance, 2001).

Initially NHI set the uniform premium rate per insured at 4.25 per cent. In 2002, more than seven years after the NHI's implementation, the program began to run an actual deficit and the government was forced to raise the contribution rate from 4.25 per cent to 4.55 per cent, which consequently created a perilous political storm. Currently, Taiwan reported spending approximately 6.26 per cent of GDP in health

[6] Both Labour Insurance and Government Employee Insurance programs offer pension plan as well as cash benefits for disability and death. Farmer Insurance provides cash benefits for maternal delivery and disability.

[7] The low income households who are exempted from premium contributions approximately represent 1 per cent of the insured population. In addition to low-income households specified in the NHI Act, there are also various government programs which fully or partially subsidize the premiums for the vulnerable group (roughly 4.5 per cent of the insured population).

care, averaging to a per capita health expenditure of NT$27,442 (US$ 807.64) in 2003 (DOH, 2003).

Delivery system

Organization of delivery

Taiwanese medical practice was heavily influenced by Japanese tradition. Japan ruled Taiwan for 50 years when it was ceded to Japan in 1895 as a colony. Following the Japanese practice, physicians dispense drugs and operate clinical beds as a part of their medical practice. The Japanese rule also created a special socio-economic and political niche for the physicians and the medical profession became the top rung of the "socio-economic ladder". Being among the elite, physicians also gained considerable amount of political influence. Their general philosophy is to protect the professional autonomy, including freedom from any regulation, including those which assure the quality of care. Meanwhile, specialists in medical centres exert enormous influence in expanding the latest sophisticated high-technology medicine, financed by government funds or by charges to patients.

Taiwan has a market-oriented health care delivery system, reflecting its free-enterprise economy (Lu, Hsiao, 2003). Under a market-driven system, both patients and providers have free choice. Patients can seek services wherever they like and practitioners and hospitals can provide whatever services and drugs they believe appropriate and charge whatever price they wanted. Hospitals and physicians are paid mainly on a fee-for-service basis.

The organization for health services shows its pluralistic form. Hospital ownership is mixed - public hospitals own 35 per cent of beds and the other 65 per cent are private (Department of Health, 2004). There are 594 hospitals in Taiwan. More than 50 per cent of the hospitals are small ones with less than 50 beds. The technical capabilities of hospitals and staffing of the hospital beds vary greatly. They range from medical centres that rival the best medical facilities in the Western nations to clinical beds that resemble outdated convalescent hospitals.

Taiwan also has 18,183 clinics (facilities with less than 10 beds). Almost all of the clinics are owned and operated by private practicing physicians as part of their medical practice. These beds are used for both observational and convalescing purposes. Some are also used as nursing beds.

To date, Taiwan has a total of 136,331 beds, which average out to 6.03 beds per thousand populations. (4.0 acute beds per thousand populations, compared to an OECD average of 3.7). The beds, however, are not distributed evenly across regions. Beds are mostly concentrated in the large metropolitan areas. There is modest success by the government to remedy the mal-distribution of hospital beds. However, the continuing growth of tertiary beds can be attributed mainly to two factors: tax policy to give a cost advantage to proprietary hospitals to expand into medical centres (Lu, Hsieh, 2003); and second, the powerful political influence of the physicians, directors, and owners of these facilities.

Sixty-three per cent of physicians are employed by hospitals and most of them are on a salary basis. The remainder is fee-for-service private practitioners. Doctors who practice in private clinics do not have hospital admitting privileges. Over the years, hospitals have developed large outpatient departments and affiliated clinics for primary care in order to maintain their inpatient flows and compete with the private practitioners owned free-standing clinics (Lu, Hsieh, 2003).

Taiwan has 1.4 physicians trained in Western medicine for every thousand people, as compared to 2.5 in the U.S and an OECD average of 2.6. 37 per cent of the western medicine physicians have their own private clinics, where they deliver primary care.

Before the implementation of National Health Insurance (NHI), Taiwan's providers were paid on a fee-for-service basis. Physicians made significant profits from drugs because they were allowed to prescribe and dispense drugs freely. This practice encouraged over-prescribing of drugs and frequent but short office visits. Fee-for-service payment further encourages induced demand for and the proliferation of new medical technology, such as laboratory and imaging tests, resulting in duplications of facilities. Consequently, Taiwanese health expenditure per person was escalating rapidly, beginning in 1960, it experienced an average increase of more than 6- 8 per cent in real terms, about 2-3 per cent above the rise in real income per person per year (Hsiao, Yaung, Lu, 1990).

Co-payment requirement

The NHI provided a comprehensive benefit package that covers preventive and medical services, prescription drugs, dental services, Chinese medicine and home nurse visits (the benefit package specified in the National Health Insurance Act lists the types of services not covered by the National Health Insurance). The NHI also

incorporated a co-payment of US$5 for each outpatient visit to clinics, US$8 for each visit to hospital outpatient clinics, and a 10 per cent co-insurance for inpatient services, but capped the total amount that a patient has to pay for each admission at 6 per cent, and for each year at 10 per cent of the average national income per person. People with catastrophic illness (disease types specified by Bureau of National Health Insurance), children under the age of six and users of maternal and preventive services as well as low-income households are exempted from the co-payment requirement. Nonetheless, the co-payment and co-insurance rates are regressive because they are fixed and unvaried by a patient's income. However, they were so designed in order to avoid the administrative burden of administering a complex individual income-related cost-sharing program.

Provider payment mechanism

Hospital physicians are often paid on a salaried basis; some receive bonus payments based on productivity. Private practitioners remain mainly reimbursed on a fee-for-service basis. BNHI instituted a uniform fee schedule for its contracted providers, adopted from the one originally implemented by the Labour Insurance program. For the same type of treatment rendered, the medical institutions are reimbursed contingent upon their accreditation status, which bestows the medical institutions incentives to "upgrade" through means of expanding capacities (Lu, Hsieh, 2003). The average bed size of medical institutions has gone up from 82 beds in 1986 to 180 beds in 2002. As a result, the market share of NHI expenditures has been unevenly absorbed by the small number of large-scale hospitals.

BNHI also introduced a reasonable volume standard for outpatient visits coupled with a sliding fee schedule for visits above the volume standard. This measure discouraged induced demand and reduced the number of visits per person. Then a proto-type of DRG payment system was phased-in for the fifty most common diseases and treatments that reduced the average length of stay in hospitals. BNHI is currently in the process of refining an all-patient DRG system which is scheduled to be instituted in 2005.

To encounter financial pressure born by steady growth in expenditure outlay and a relatively lagged increase in premium income, BNHI gradually set up separate global budgets for dental services, Chinese medicines, and primary care services (outpatient services delivered in clinic settings) over the years. In 2002, Taiwan created a

separate global budget for hospital outpatient and inpatient services.

Assessment

This section examines the system performance focusing on the following five aspects: equity in health care financing, financial risk protection, equity in access and utilization, health expenditure growth and quality of care.

Equity in health care financing

One method of measuring the equity in financing by socio-economic class developed by the World Health Organization (WHO), the WHO fairness in financial contribution index (FFC), was released in the WHO 2000 report. Despite the fact that the method has been widely criticized (Wagstaff, 2002), it is still the only method that has been used to evaluate equity in financing for all nations.

WHO's FFC index intends to measure inequality in the share of households' income spent on health. A household's financial contribution to health is defined as the ratio of total household spending on health to the household's total capacity to pay. The value of the index ranges from zero to one. Countries with scores closer to one tend to be more equitable in the financing of their health care than those with lower scores. The WHO FFC index was computed based on the data from the annual government household surveys of income and expenditures, and results have shown that the equity in financing health care in Taiwan has improved since the implementation of NHI (0.992 in 1998 vs. 0.881 in 1994) (Lu, Hsiao, 2003). The change in FFC index indicates that the share of health financing burden borne by the households has become more equal since the introduction of NHI.

Decomposing the financing sources into direct and indirect tax, social insurance, private insurance and household direct payment, and examining the financing mix, it was found that the share of national health expenditures (NHE) borne by the private sector has been on the decrease since the introduction of NHI in 1995, from 51.71 per cent in 1993 to 39.05 per cent in 2000. While the public sector (including social insurance premiums) contributes to 61 per cent of total NHE, out-of-pocket payments have accounted for roughly one-third of the total bill. A rapid increase, nearly three

times as much, in the share taken by private insurance component between 1993 and 2000 is also observed (Table 2). Examining the progressivity (indicated by Kakwani index) of the financing mix in 2000 (Table 3), except for social insurance (Kakwani index of -0.0749) and household out-of-pocket payment (Kakwani index of -0.078) which showed very mild regressivity, all the other financing sources all demonstrated progressivity. Research results have shown that the better-off pay more in absolute term but less as a proportion of income, nonetheless, the total payment is rather proportional (with a Kakwani index of -0.0292 for total financing).

Financial risk protection

Taiwan's NHI covers a comprehensive package of services, including all medical and laboratory services, dental care, drugs, Chinese medicine and drugs, and home nurse visits. The 10 per cent co-insurance for hospitalization is capped at 6 per cent of the average national income per person for each admission and at 10 per cent for each calendar year. Poor households are exempted from paying all the cost-sharing. In short, the population covered by NHI is well protected against uncertain large medical expenses, other than long-term nursing home care. Furthermore, as shown in Table 2, the household direct payments were reduced from 48 per cent of the NHE in 1993 to 30 per cent in 2000. Nonetheless, this 30 per cent share of NHE by household direct payment is comparably higher than most of the advanced economies which have adopted social insurance schemes to achieve universal coverage. Examining the catastrophic impact of household direct payment on health, it was found that NHI has also improved the burden of catastrophic payment. In 2000, fewer than 20 per cent of the households (compared to 24 per cent in 1994) spent more than 5 per cent of household consumption expenditures on direct payment on health, and less than 4 per cent of the households spent more than 15 per cent (Lu, O'Donnell, van Doorslaer, 2003). It signifies the reduction in spending share (direct payment as a percentage of total household expenditure) on health as a result of the introduction of the NHI program. In addition, much less proportions of households fall below the pre-defined threshold level in 1995 compared with that in 1994. Furthermore, the incidence and intensity of the catastrophic payment shifts to a pro-rich direction as a result of NHI program, that is, it tends to fall on the worse-off in 1994, but the direction is reverted in 1995. Finally, a reduction in poverty impact is observed when assessing the household direct payment on health using official poverty line as threshold level (Lu,

O'Donnell, van Doorslaer, 2003).

Equity in access and utilization of services

The impacts of NHI on people's access to health care have not been fully evaluated in Taiwan. However, a few observations were offered. One small cohort survey of randomly selected 1025 adults, found that after NHI, those who were previously uninsured had increased their utilization of outpatient visits to the same level as those who were previously insured (Cheng, Chiang, 1997). Aggregated hospital statistics collected showed that the average hospital admission rate increased from 110 per 1000 in l994 to 120 admissions per 1,000 in 1996 and 130 admissions per 1,000 in 2001 (Lu, Hsiao, 2001; Lu, 2005).

Nearly equal financial access does not necessarily mean that the providers are physically available within a reasonable distance to everyone (Lu, Hsiao, 2003). Taiwan has low-income neighbourhoods, and 1.64 per cent of its population live on remote islands and in mountainous areas. While they may have nearly equal financial access, the poor and the people living in these remote areas may not have equal physical access due to the mal-distribution of health resources. For example, fifty-nine per cent of the residents in the mountainous areas reported more than 30 minutes of travel time (one way) to their primary doctor (NHRI, 2001). BNHI has taken action to ameliorate the problem through a multi-faceted program. On the supply side, it introduced incentives for providers to practice in the remote areas. Also, BNHI organized and encouraged services-on-wheels to "tour" around the remote areas on a regular schedule. On the demand side, the government exempted cost sharing for the poor and for those who live in the remote areas.

Adopting the horizontal equity principle, which in practice is often translated as "equal treatment for equal need", researchers have employed the index of horizontal inequity developed by Wagstaff and van Doorslaer (2000) to examine the income-related inequality and inequity in medical utilization in Taiwan. The empirical analyses were performed on a national representative sample from the 2001 Health Interview Survey (HIS) which included 7,632 household totalling 31,436 individuals. In addition to gender and age, a generic self-assessed health status measurement, SF-36, is also applied to proxy differences in health care need in the model. The results show a pro-poor distribution of utilization for services that are more extensively covered by NHI, such as hospitalization, western allopathic

physician visits and emergency visits. Standardization for differences in need shifts all distributions in a pro-rich direction, as would be expected given the socio-economic determinants of health (Table 4). For services with limited NHI coverage (such as dental, traditional healer, and Chinese medicine practitioner visits), the distribution tends to be pro-rich (Table 5).

Health Expenditure Growth

The rapid increase in health expenditures is a major concern to many nations around the world. Researchers have examined the cost containment efforts through analyzing the residuals for NHE growth rate for the pre-NHI years and post-NHI years (Lu, Hsiao, 2003). The residuals were computed and compared after decomposing the nominal annual rates of increase in NHE from 1993 to 2000 into various known causes: the increase in population, ageing of the population, change in demand due to increases in income, and increases in input factor prices. As Taiwan didn't have any political and socio-economic shocks that affected health expenditures other than the NHI in those years, the differences in the residual levels are likely due to NHI. The residual has been approximately 2 per cent per year between 1993 and 1995, similar to the average rate in years 1970-1986. However, the residual jumped to close to 7 per cent in 1995 when NHI was implemented, which may be interpreted as the insurance effect of NHI. Then the residual fell measurably below the historical level, averaging close to 0 per cent from year 1996-2000. As shown by the evidence, the total increase in NHE between 1995 and 2000 was not more than the amount that Taiwan would have spent, based on historical trends.

While NHI had successfully managed the increases in health expenditure, its revenue base, from which its revenues were derived, was not keeping pace with increases in national income. As the earnings base was capped (and the top earning base is only 5.5 times as much as the lowest earning base), it was growing more slowly than the national income. Meanwhile, the increases in medical costs caused by ageing populations and the expansion of new medical technology were demanding that a higher percentage of national income be used to fund health care. Any health care financing approach that relies on the current national income (or payroll) as a base to fund the program will have to raise its contribution rates periodically (Lu, Hsiao, 2003).

As a single-payer, NHI produces some direct savings through its market power.

Its operational efficiency was enhanced through a universal uniform reporting procedure and claim filing system which substantially reduces administrative costs and achieves economies of scale, while instituting a uniform fee schedule for services rendered by the contracted providers. The single–payer system also offers the information and tools to effectively manage health care costs through a stringent claim review process. Taiwan was able to manage its NHE growth at an affordable rate through a single-payer mechanism (Lu, 2004).

Quality of care

Taiwan has not collected comprehensive information on the clinical quality of health care. Formal quality assurance is still at a primitive stage in Taiwan. The government did not initiate a formal voluntary hospital accreditation program until 1998[8], and until recently had the government mandated accreditation through a new legislation. Nonetheless, there is no regulation requiring the systematic reporting of clinical performance, patient outcomes or adverse events. Furthermore, the hospitals are not required to have uniform clinical record systems.

After the implementation of hospital global budget in 2002, there were sporadic reported incidents that patients got turned away by hospitals which attempted to maximize payment rate by reducing service volume. A recent attempt by BNHI to link payment rate with quality of care was experimented on treatment for cervical cancer, breast cancer, asthma, diabetes, and TB. Nonetheless, the effectiveness of the experiment has not yet been thoroughly researched.

3. Summary and Policy Recommendations

Taiwan established NHI which provided universal coverage and a comprehensive

[8] In 1999, the government, the hospitals and the medical associations agreed to establish the non-profit Taiwan Joint Commission on Hospital Accreditation (TJCHA), which regularly accredits hospitals to assure quality of care. Over the recent years, TJCHA has gradually modified the indicators for accreditation, which range from hospital staffing ratios (structure aspect) to readmission rate (outcome aspect). In addition, the contents and format of medical records are also evaluated. Nonetheless, in order to solicit the collaboration from hospitals in submitting the actual data measured by quality indicators, TJCHA has agreed not to release details but only announce the names of the hospitals which passed the accreditation process. In other words, there is no publicly available information regarding quality of care for institutional providers.

benefit packages to all of its citizens in 1995. The goal of universal coverage was achieved by dint of merging all the then existing social insurance programs and extending the coverage to those who were not insured. The uninsured then mainly were people who were unemployed (children, homemakers, and the elderly), people who were employed by small firms and those self-employed.

The NHI administration operates a single-payer system with a uniform payment schedule which effectively controls "cost shifting" among different payers, a phenomenon often observed in a multi-payer system. The single-payer system also provided comprehensive information to create provider profiles to reduce potential fraudulent claims, abuses in coding, and the over-use of tests. It also allowed stringent control of claim payments across the board (Lu, Hsiao, 2003).

It appears that household direct payment is a significant share (30 per cent) of NHE, compared to most of the advanced economies which also adopt the social insurance scheme as the major financing source. Although, no significant poverty impact as a result of health payment is observed, the significant share may well be a shift in consumption pattern. The insured may reinvest payment saved in exchange for amenity, such as a private room in the hospital, or service items not covered by NHI, such as brand name drugs or elective plastic surgery etc.

In summary, in respect of the overall distribution of the financial burden, the better-off pay more in absolute terms but less as a proportion of income and the total payment is rather proportionally distributed. On the access to use side, for all the essential medical services (hospital admissions, visits to western medicine practitioners, and emergency services), a pro-poor distribution of use rates is observed, although standardization for differences in need shifts all distributions in a pro-rich direction. Nonetheless, the magnitude of pro-rich distribution (after standardization) is pretty modest. The low income household is also exempted from premium contribution and co-payment requirement at the point of service.

Policy recommendations

Reform in premium structure

The financial distress, as a result of almost depleted NHI reserves, encountered by NHI has made the headline several times in the past year. The financial insolvency of NHI has resulted from the fact that the premium income has not been able to

appropriately reflect the national income growth. The problem exacerbates as there is a lack of public collective willingness to pay for the coverage, and the political opponents seized the opportunity to criticize the government and mobilize the public to fight against any proposal which intends to increase the premium contribution rate. In response to all this political infights, the call for a reform in premium collection structure has arisen.

Any health care financing approach that relies on the current national income (or payroll) as a base to fund the program will have to raise its contribution rates periodically and the public should be educated to be fully aware of the operating mechanism. To avoid unnecessary political storms occurring in response to premium increases in the face of financial insolvency, the government should reform the premium collection structure so it closely follows the principle of "payment according to ability to pay". In addition, a profound review mechanism which routinely monitors premium incomes should be instituted into the system to regain the public's confidence.

Management of health care expenditures

The research evidence has shown that the annual growth rate of NHE between 1995 and 2000 was not more than the historical trend in its pre-NHI period. Nonetheless, there is room for improvement. Taiwan devoted 21.39 per cent of its NHE on pharmaceuticals and other non-durables in 2002, compared to an OECD average of 17.4 per cent. Taiwan spent a more significant share of NHE than most of the developed countries have spent on pharmaceutical products as the margins are lucrative to the providers and have been a major source of their revenues. As the single administration in charge of NHI, BNHI should fully utilize the information contained in the claim data and profile the providers' prescribing behaviours. A routine monitor mechanism should be built in to review the prescribing patterns and a monthly report should be produced and sent to the providers to arouse their awareness. A reward system may be established to provide the incentives for appropriate prescribing behaviours.

Quality assurance

The issue of quality assurance remains crucial, in particular in the post-global budget era. After the global budgets were applied to different sectors of service

delivery systems, the health care providers have been having with a more stringent control over health care expenditures and have coerced the public resulting in lower quality of care. The government has not been able to fully implement a quality assurance program to guarantee the insured's right to appropriateness of care. The government is strongly urged to promote the establishment of a non-profit independent organization which will see to the quality care issues.

Further investigation into the disadvantaged group

The equity indicators in health care financing and medical utilization rates seem to suggest that NHI has successfully eased the financial burden and reduced the entry barrier to care for the overall population. Nonetheless, the performance observed at aggregate level may not reflect the hidden unmet demand by some particular disadvantaged groups, such as the elderly, the children, the insured with catastrophic illness, and the people who live in remote islands and mountain areas. The government should devote to commissioning research projects and surveys aiming at further investigating the financial burden imposed upon, and the potential access barrier faced by, the disadvantaged group.

Further investigation into the self-pay consumer group

The significant share of NHE borne by household direct payment is worth further examination. The consumption pattern of the self-pay consumer group will impact profoundly on the development of the health service industry. An in-depth understanding of the size and distribution of household direct payment and characteristics of the self-pay consumer group will shed some light on shaping the corresponding strategic planning.

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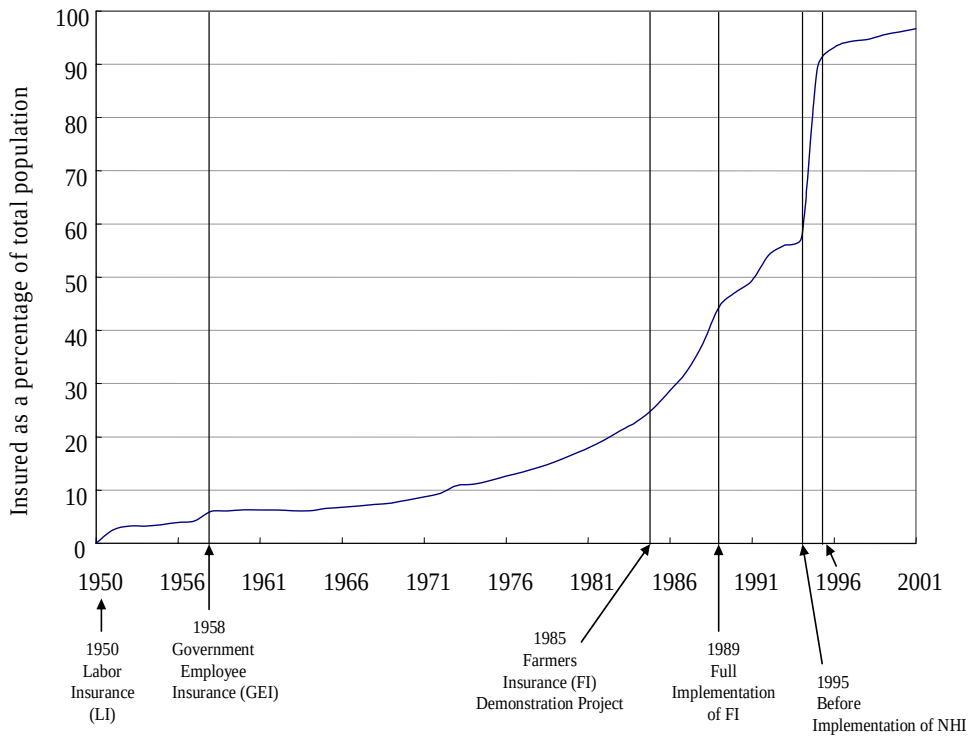
Figure 1: Insurance coverage expansion, 1950 to 2001



Source: Graph adapted from Chapter 14 in "Health Economics", Lu and Hsieh, 2000. Post-1995 data from the Bureau of National Health Insurance, http://www.nhi.gov.tw/01intro/statistics/s02.htm (January, 2003).

Table 1: Characteristics of health insurance and welfare schemes in Taiwan, prior to achievement of universal coverage in March 1995

Characteristics	**Labor Insurance**	**Government Employee Insurance**	**Farmer Insurance**	**Local Representatives Insurance**	**Low-Income Household Insurance**	**Private Insurance**	**Uninsured persons**
1. Scheme nature model	Social insurance Compulsory for large firms	Social insurance Compulsory	Social insurance Compulsory	Social Insurance Voluntary	Social welfare Compulsory	Commercial insurance Voluntary	
2. Population coverage,1995	all labor workers in formal sector, 15~60 years old	Government employees and teachers/faculty members in private schools/universities	Farmers >=15 years old	City/county/ town council representatives	Low-income household members		
Population in Dec. 1994	8,496,833	1,793,094	1,737,740	27,315	117,098	NA	
% of total population in 1995	40.12	8.47	8.21	0.13	0.55	NA	42.52
3. Benefit package	-	-	-				
Ambulatory services	Yes	Yes	Yes	Yes	Yes		
Inpatient services	Yes	Yes	Yes	Yes	Yes		
Choice of provider	Contracted provider	Outpatient: Joint OPD Center; Inpatient:	Contracted providers	Contracted providers	Contracted providers	Free choice	Free choice

Characteristics	**Labor Insurance**	**Government Employee Insurance**	**Farmer Insurance**	**Local Representatives Insurance**	**Low-Income Household Insurance**	**Private Insurance**	**Uninsured persons**
		Contracted providers					
Cash benefit	Yes	Yes	Yes	Yes	No	Mainly cash benefits	No
Conditions included	All	All	All	All	All	All but pre-existing condition	-
Conditions excluded	No	No	No	No	No	Often pre-existing condition	
Maternity benefits	Yes	Yes	Yes	Yes	Yes	Yes	
Annual physical check-up	Yes	No	No	No	No	No	
Prevention, health promotion	No	No	No	No	No	No	
Services not covered	Elective plastic surgery, Chinese medicines, dental services, eyeglasses	Elective plastic surgery, Chinese medicines, dental services, eyeglasses, some high-tech services	Elective plastic surgery, Chinese medicines, dental services, eyeglasses, some high-tech services	Elective plastic surgery, Chinese medicines, dental services, eyeglasses, some high-tech services	Elective plastic surgery, Chinese medicines, dental services, eyeglasses, some high-tech services	Depends on package	

Characteristics	Labor Insurance	Government Employee Insurance	Farmer Insurance	Local Representatives Insurance	Low-Income Household Insurance	Private Insurance	Uninsured persons
4. Financing							
Source of funds	Payroll tax, shared by the employer (80%) and the employee (20%)	Payroll tax, shared by govt and the insured (depends on plan type)	Preset wage income, shared by govt (70%) and by the insured (30%)	Preset wage income, equally contributed by govt and the insured	Government subsidies	Premium income	Direct payment
Financing body	Council of Labor Affairs	Ministry of Civil Services	Council of Labor Affairs	Ministry of the Interior	Ministry of the Interior (Dept. of Social Affairs)	Commercial insurers	
Payment mechanism	Fee for service	Fee for service	Fee for service	Fee for service	Fee for service	Fee for service	
Copayment	No	No (some insurance schemes require 10% of OPD drug exp)	No	No	No	No	
Expenditure per capita 1993	NT$ 7,699 (US$ 289.15)	NT$ 10,721 (US$ 402.65)	NT$ 14,214 (US$ 533.84)	NT$ 17,990 (US$ 675.66)	NT$ 12,681 (US$ 476.26)	NA	NA
Tax subsidy per capita (1993)	NA	NA	NA	NA	NA	NA	NA

Table 2: Financing Mix in Taiwan, 1993-2000

Year	Direct tax	Indirect tax	General tax	Social insurance	Total public	Direct payments	Private insurance	Total private
1993	7.61%	6.94 %	14.56 %	33.74 %	48.29 %	48.69%	3.01 %	51.71 %
1994	7.54 %	6.98 %	14.52 %	34.69 %	49.22 %	47.38 %	3.40 %	50.78 %
1995	6.74 %	6.13 %	12.87 %	46.58 %	59.45 %	37.32 %	3.23 %	40.55 %
1996	5.91 %	5.50 %	11.41 %	48.97 %	60.38 %	36.14 %	3.47 %	39.62 %
1997	5.52 %	4.61 %	10.13 %	50.25 %	60.38 %	35.44 %	4.18 %	39.62 %
1998	5.21 %	4.12 %	9.33 %	52.35 %	61.68 %	32.57 %	5.76 %	38.32 %
1999	4.98 %	4.06 %	9.03 %	52.28 %	61.31 %	31.43 %	7.26 %	38.69 %
2000	5.19 %	3.98 %	9.17 %	51.78 %	60.95 %	30.15 %	8.90 %	39.05 %

Source: Lu, J.R., O.O'Donnell, E. van Doorslaer, 2003, "The Financial Implications of the Health Care Reform in Taiwan", working paper, paper presented in 2003 iHEA World Congress.

Table 3: Progressivity of the financing sources, measured by Kakwani index, 1996-2000

Year	Direct tax	Indirect tax	General tax	Social insurance	Total public	Direct payments	Private insurance	Total private	Total payment
1996	0.22478	0.05161	0.14131	-0.09369	**-0.04928**	-0.1115	0.27676	**-0.07749**	**-0.06045**
1997	0.22698	0.04737	0.14524	-0.09713	**-0.05647**	-0.09903	0.17831	**-0.06977**	**-0.06174**
1998	0.24919	0.04560	0.15929	-0.08538	**-0.04837**	-0.08925	0.19082	**-0.04716**	**-0.04791**
1999	0.24789	0.04168	0.15528	-0.07622	**-0.04209**	-0.08876	0.20491	**-0.03365**	**-0.03883**
2000	0.24378	0.04039	0.15550	-0.07493	**-0.04026**	-0.07801	0.2053	**-0.01344**	**-0.02979**

Source: Lu, J.R., O. O'Donnell, E. van Doorslaer, 2003, "The Financial Implications of the Health Care Reform in Taiwan", working paper, paper presented in 2003 iHEA World Congress.

Note:

1. General tax refers to the sum of direct tax and indirect tax.
2. Total public refers to the sum of general tax and social insurance contribution.
3. Total private refers to the sum of direct payments and private insurance contribution.
4. Total payment refers to the sum of all financing sources.

Table 4: Income-related inequality and inequity in uses rates of hospital admissions, emergency services and western medicine doctor visits (n=19,548)

	Hospital admissions		emergency		Western medicine	
quintile	before standardization	after standardization	before standardization	after standardization	before standardization	after standardization
poorest	0.138	0.098	0.159	0.129	0.839	0.683
2	0.109	0.102	0.154	0.148	0.720	0.686
3	0.072	0.085	0.115	0.125	0.692	0.749
4	0.081	0.100	0.124	0.138	0.620	0.696
richest	0.066	0.087	0.138	0.156	0.640	0.720
mean	0.095	0.095	0.140	0.140	0.704	0.704
CI/HI	-0.149	-0.025	-0.038	0.028	-0.056	0.010
s.e.	0.0189	0.0179	0.0162	0.0158	0.0086	0.0081
t value	-7.880	-1.400	-2.340	1.800	-6.560	1.250
P>t	0.000	0.162	0.019	0.072	0.000	0.210

Source: Lu, J.R., 2005b, "Horizontal inequity in medical care utilization – further examination of the impact of Taiwan's National Health Insurance program", working paper.

Note: Use rates for hospital admissions and emergency visits are based on one year recall period; for visits to western medicine practitioner, it is one month.

Table 5: Income-related inequality and inequity in uses rates of Chinese medicine doctor visits, dental services and traditional healer visits (n=19,548)

	Chinese medicine		dental		traditional healer	
quintile	before standardization	after standardization	before standardization	after standardization	before standardization	after standardization
poorest	0.155	0.135	0.204	0.190	0.148	0.116
2	0.156	0.153	0.212	0.208	0.165	0.159
3	0.172	0.178	0.190	0.197	0.133	0.145
4	0.171	0.179	0.218	0.225	0.179	0.195
richest	0.188	0.198	0.221	0.227	0.222	0.237
mean	0.167	0.167	0.210	0.210	0.171	0.171
CI/HI	0.040	0.074	0.016	0.035	0.072	0.127
s.e.	0.0216	0.0215	0.017102	0.017083	0.0332	0.0331
t value	1.850	3.440	0.940	2.060	2.160	3.830
P>t	0.064	0.001	0.350	0.040	0.031	0.000

Source: Lu, J.R., 2005b, "Horizontal inequity in medical care utilization – further examination of the impact of Taiwan's National Health Insurance program", working paper, paper to be presented in iHEA 2005 World Congress.
Note: Use rates for visits to Chinese medicine, dental services and traditional healer are based on one-month recall period.

Chapter 4

Social Health Insurance Experience in Mongolia

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Abstract

The paper outlines social health insurance experience in Mongolia in terms of health financing and service delivery. Mongolia's health system was fully funded by the government until the country started fundamental socio-economic and political reforms in early 1990s. The economic transition resulted in financial crisis and shortages in government revenue that severely diminished health sector funding. Various cost recovery and cost sharing initiatives have been experimented with to ease government budget deficits. Basic social services failed to tackle new social problems such as unemployment and poverty.

Household income deteriorated due to high inflation rate and weakened purchasing power. In 1994, Mongolia introduced compulsory social health insurance with the aim of mobilizing additional funding resources and provides greater financial protection for the population. Near universal coverage achieved within a short period of time with significant subsidy provided by the government. The principles of social solidarity through risk sharing, fund pooling and cross subsidy have been applied among large population groups. Despite many successes, the health system in Mongolia is still grappling to improve health equity, quality, provision and utilization of health services through health insurance. The recent government policy on reduction of the targeted subsidies for health insurance premium has resulted in decreased health insurance coverage among the population. However, social health insurance development in Mongolia has enabled the government to provide relatively equitable and accessible health care to the entire population with minimal out-of-pocket financing during the difficult economic transition period. Future policy changes recommended towards expansion of health insurance benefit package, include the extension of prospective payments such as capitation, and family coverage along with strengthening of the current health insurance administration and management.

1. Introduction: A brief country profile

Mongolia is a landlocked and sparsely populated country with average population density of 1.4 persons per square kilometres. Mongolia is the fifth largest country in Asia with a total land area of 1565 thousand square kilometres. In 2002, the population of Mongolia was 2.5 million, with 57.4 per cent classified as urban and 42 per cent as rural. About 20 per cent of the population are nomad cattle breeders engaged in nomad animal husbandry.

The main pillar of the economy is the agriculture sector together with trade, transport, communication, manufacturing, and mining. Fundamental socioeconomic and political reforms towards a market economy started in early 1990s. During the early years of economic transition, Mongolia experienced a negative growth rate of 9.2 per cent in 1991 and 9.5 per cent in 1992. Since 1994, Mongolia experienced positive, but very modest economic growth. In 2002, real GDP increased by 4 per cent. The inflation rate has fallen from 8 per cent in 2000-2001 to 1.6 per cent in 2002. Macroeconomic stabilization measures, privatization of state enterprises, and public sector reform are expected to continue to achieve stable economic and social development in the near future.

Mongolia is classified as a low-income developing country with an annual GDP per capita income of US$ 450. The country spends about 6 percent of GDP and 10 percent of Government budget on health, which can be roughly translated into US$ 25 per capita health expenditure (WHO, 2003). The ability of the state to provide comprehensive social services including health is still limited. In the past, Mongolia has achieved many successes in the health sector. Within the last 40 years, the infant mortality per 1000 live births declined 3 times and the average life expectancy reached 65, which is 2 times higher than 80 years ago. Significant achievements have been made in controlling infectious diseases. The immunization coverage already reached more than 90 per cent of the population eligible for vaccination. Mongolia is one of the countries where poliomyelitis has been eliminated (Sodnompil, 2003).

In 2003, the population growth rate was 12 per 1000 population. Life expectancy at birth was 63.5, subsequently 60.8 for males and 66.5 for females (WHO, 2004). In the past, health infrastructure was relatively well developed in Mongolia. Health services are offered at 4 referral levels and the total hospital bed capacity still exceeds

18,000 beds. More than 90 per cent of the hospital beds belong to public hospitals. The private sector is still insignificant in terms of size, number of beds and service range. In 2003, the number of medical doctors and hospital beds per 10,000 populations was reported as 26.7 and 73.2 respectively (MOH, 2004).

There are large differences in the morbidity and mortality pattern of populations living in urban and rural settings. Deaths from cardiovascular diseases, cancer, and injuries have continuously increased, while communicable and respiratory diseases have declined. Maternal and child health is one of the important priorities in Mongolia. Maternal mortality has been relatively stable at the level of 145-176 per 100,000 live births from 1996 to 2001. In 2003, infant and under five mortality rates per 1000 live births have been reported as 23.5 and 31.3 respectively (WHO, 2004).

2. The Health System

Financing schemes

Before 1990, health care in Mongolia was fully funded and delivered by the government. The entire population had free access to health care without significant financial and physical barriers. Health of the population had greatly improved and many health problems and major diseases successfully controlled under the centralized management system albeit with some inefficiency. Following the collapse of the Soviet Union and the introduction of market reforms, Mongolia's health system entered a period of financial crisis marked by severely diminished funding levels (Knowles, 2004). The level of health expenditure as a percentage of GDP has dropped from 6.7 per cent in 1990 to 4 per cent in 1992 (MOH, 1993). Drastic cutbacks in government health expenditure in early 1990s had affected the quality and access to health services especially, in the rural areas. The government lacked adequate funding resources to support a range of activities that were carried out in the past. In real terms, the government budget met only 60 to 70 per cent of the previous year's health budget (Bayarsaikhan, 1995). The gap had to be filled by other sources including user fees to sustain health care. Different cost recovery and cost sharing initiatives have been experimented under various reforms to introduce market elements into the health sector and to reduce the government’s role in provision and financing health services. The Constitutional provision of free health services was changed and user fees for

publicly provided health services and private health practices were encouraged to ease government budget deficits. However, social security, equity, and access to needed health care were the central policy issues in implementing such reformative measures in the face of high inflation and rapid increase of unemployment as a result of the closure of many state-owned enterprises (Bayarsaikhan, Kwon, Ron, 2005). Social health insurance based on contributory prepayment mechanism with risk sharing and fund pooling elements was an attractive option for Mongolia. Through a series of discussions, a political consensus was reached on the development of social health insurance. Health insurance is regarded as an effective mechanism to mobilize new financial resources for health care, while maintaining equitable access by all insured members to necessary health services and protecting the low income and vulnerable population from catastrophic health expenses. It is also expected that additional revenues mobilized through health insurance would allow the government to re-allocate budgetary resources from curative to preventive and public health services (Bayarsaikhan, Kwon, Ron, 2005).

As a result, a social health insurance scheme was developed and approved by the government. The Law on Mongolian citizen's health insurance was passed by the Parliament in 1993. Actual implementation of the law started in 1994. With the introduction of health insurance, health care is legally considered as a shared responsibility of the government, individual citizens and business organizations. The health insurance scheme in Mongolia is compulsory for all public and private sector employees, the low-income and vulnerable population. The government is committed to subsidize the health insurance premium for the low income and vulnerable population. These include children under 16 years old, students, pensioners, nomad cattle breeders, persons on regular military service, disabled individuals and citizens covered by social assistance. This population group accounts for nearly 70 per cent of the total population and most of them are children under 16 years old. The law also provided voluntary insurance for working aged unemployed people who have capability to work. Within the first 2 years, almost 96 percent of the population covered by health insurance were on a compulsory basis (MOH, 2001).

The social health insurance scheme in Mongolia applies two basic forms of health insurance premiums depending on the population group. For the low income and vulnerable population, the health insurance premium is established as a fixed monetary amount per person per month based on historical budget trends. Another form of the

premium is income related, similar to payroll tax. It is established as 6 per cent of wage income (salary and similar income) for the employed sector. According to the law, all employers are required to contribute a minimum 50 percent of the premium.

The contribution revenue has been the main basis for defining and implementing a health insurance benefit package. Initially it included nearly all types of hospital care, except the treatment of certain specified chronic and infectious diseases such as diabetes, tuberculosis, brucellosis and HIV/AIDS. The government took the responsibility for providing the treatment for these diseases free of charge. Outpatient drug cost also was reimbursed by the insurance fund, if the drugs prescribed by the doctor are on the National Essential Drug list. Recently, the benefit package was extended to a limited number of ambulatory care in public and private health facilities and also the services delivered by family physicians.

The introduction of health insurance expanded the sources of revenue for financing health services in Mongolia. About half of the health sector funding began to channel through health insurance and another half through central and local government health budgets (Bayarsaikhan, 1995). However, the share of health insurance financing in total health expenditure has been decreasing since 1999, when fixed cost of public hospitals such as heating, water, electricity and hospital building maintenance was transferred to central and local government budgets. Such non-service related health expenditure is quite a costly component, which absorbs almost 25-30 per cent of health budget during a winter season. The main purpose of this budget transfer was to control hospital expenditure by providing financial disincentives for unnecessary expansion of hospital capacities and building new hospitals due to health insurance funding. Currently, health insurance financing supports only variable costs of the health care services, which are included in the benefit package. Newly emerging private practices and hospitals have access to health insurance funding, but their number and coverage are still insignificant. The current health insurance benefit package does not cover any services rendered abroad. However, there is a trend showing an increase in members who have requested partial reimbursement of the costs associated with their medical treatment abroad. This initiates some private business companies to develop private health insurance programs complementary to the public one. Nonetheless, this is still at a very early stage of development.

According to the preliminary estimates from WHO Health Report (2003) and

recent NHA project activities, the Mongolian government was reported to be responsible for 43 per cent of National Health Expenditure (NHE), social health insurance, 29 per cent, and the rest 28 per cent was borne by the household direct payment.

Service delivery system

The health service delivery and referral system in Mongolia is built following the administrative management system that consists of 21 provinces. Each province administratively is divided into a number of rural districts and units. The first service contact for herdsmen is a rural assistant doctor working at the lowest administrative unit the so-called "*bag*". The next or first medical referral is built at the next administrative level "*sum*" rural district. Every "*sum*" has a rural hospital with 10-20 beds and 4-6 "*bag*" health posts each assigned with an assistant doctor. Currently, more than 300 "*sum*" hospitals and about 1400 "*bag*" health posts are delivering basic and primary health care services to the rural and nomad population in Mongolia. A hospital with 200-300 bed capacity is built in each provincial and urban district. These hospitals are mainly responsible for delivering secondary health care services to both the rural and urban population. The outpatient unit of provincial hospitals and urban district clinics attached to district hospitals deliver basic ambulatory care for the population in provinces and urban districts. The role of the private sector in delivery and financing of health services is minimal. More recently, family group practices have been introduced in all provincial centres and urban districts. Tertiary care for the entire population is provided by more than 10 state hospitals and specialized health centres located in the capital city Ulaanbaatar.

The health care delivery system in Mongolia is facing three major problems, which include poor quality of care, inefficient provision and utilization at all referral levels, and health inequity mainly between urban and rural areas (Knowles, 2004). Health service cost in Mongolia is relatively high due to the low population density, cold weather climate and large dependency on imported pharmaceuticals, medical equipment and supplies. Geographical distance also affects transportation cost for accessing to health services especially, from remote rural areas to the provincial centre and capital city. Inpatient care is the most expensive component, which absorbs a large amount of funding resources. A study conducted by the Ministry of Health in collaboration with UNICEF reports that inpatient care is accountable for about 80

percent of provincial expenditures and above 70 percent of rural district health expenditures (MOH, UNICEF, 1994). Therefore, one of the primary focuses of health insurance was to provide equitable access to inpatient care at the three hospital referrals.

Health insurance has become the second major source of hospital financing next to the government budget. As a result, the insured members basically had free access to needed inpatient care because all official fees and co-payments were not applicable, if the insured patient follows the referral system. Inpatient bed-day tariff was developed as the main payment mode for hospitals depending on their referral levels. Along with hospitals, public pharmacies were reimbursed according to the price of essential drugs dispensed to the insured. Under this retrospective hospital payment method, the total number of hospital admissions increased from 376,330 in 1993 to 504,490 in 1996 and the number of hospital beds rose from 21,500 to 23,082 during the same period (MOH, 2001). Since the number of hospital beds and utilization rates were the major determinants of health insurance financing, all hospitals had incentives to admit the insured people even for minor health problems and prolong their hospital stay. Free access to inpatient care also created some incentives for the insured members to visit hospitals and seek hospitalization for even minor or medically unnecessary conditions. Such implications led the government to change the payment mechanisms towards output-based payments.

The health insurance scheme in Mongolia is still exerting efforts to apply the best payment method to monitor undesirable incentives caused by different payment methods. Currently, hospitals are paid prospectively based on a flat rate tariff per admission and expected rate of utilization. A limited number of outpatient services are paid on a flat rate fee-for-service basis. Family physicians are paid on an age-and-sex adjusted capitation. Health insurance reimburses up to 50 per cent of essential drug cost prescribed by "*bag*", "*sum*" and family doctors. In addition, 10-15 per cent of co-payment for inpatient care was introduced to restrict the demand on medically unnecessary hospitalization. Hospitals are allowed to charge if the insured by-passed the established medical referral system or the patient is uninsured. However, there is still only limited use of user fees in Mongolia's public health system. The current fees including unofficial payments are relatively low compared to the fees charged in many low-income countries, even considering that essential drugs are not provided free of charge with outpatient care (Knowles, 2004).

Assessment

The Mongolian health care system is gradually getting over the economic hardships caused by the fundamental socio-economic reforms. Three problems include low income, low population density, the existence of a large informal sector including nomads, a high dependency ratio and newly emerging social problems, such as unemployment and poverty which led to multi-dimensional needs in health care financing and delivery (Bayarsaikhan, Kwon, Ron, 2005). During the economic transition, the social services and living conditions of the population deteriorated sharply, and the government recognized compulsory social health insurance as a policy instrument to provide equitable and universally accessible health care.

Public awareness and support for fundamental reform measures towards democracy, market economy and social development have contributed to social health insurance development in Mongolia. High government commitment and targeted subsidies under the social health insurance scheme has ensured near universal coverage in a very short period of time (Bayarsaikhan, Kwon, Ron, 2005). The decision to cover the larger population by health insurance on compulsory basis was crucial for risk sharing, fund pooling, equity and access for the low income and vulnerable population.

However, the scheme is facing challenges in maintaining the achieved near universal coverage. The satisfaction and compliance of the insured members have declined in recent years. There seems to be a perception that health insurance coverage does not provide good value for money (Knowles, 2004). Since the benefit package was limited to inpatient services, the insured people were treated basically the same as uninsured when they seek outpatient care. It means that most of the members of the scheme did not benefit much from health insurance, except in the case of hospitalization. The annual report of the State Social Insurance General Office for 2001 shows that a large majority, 62 percent of the contributing members, have not received any benefit in that year. The co-payment introduced in the public hospital system was accepted with some resistance among the population. Another critical factor was the gradual exclusion of students and nomads from the government subsidy, which seriously interrupted their contribution payment and dropout. By the year 2002,

only about 50 per cent of the population compared to 70 per cent in 1994 remained under the government subsidy. Migration of rural families into the capital city looking for employment opportunities is another new trend in Mongolia. These families are often unregistered by local administrative units, which exclude them from government subsidized health insurance coverage. Due to these changes, health insurance coverage among the population has declined from 96 per cent in 1996 to 78 per cent in 2003 (MOH, 2004). The decrease in population coverage can have serious implications in the situation of steadily increasing health care costs, frequently applied unofficial payments including under-the-table payments and rapidly growing private practices.

Despite these challenges, social health insurance development in Mongolia had contributed to the efforts of the government to maintain relatively equitable and accessible health care to the population with minimal out-of-pocket financing especially during the difficult economic transition period. Financial records of the Ministry of Health for 1998-2003 suggest that only 3-7 per cent of the total health expenditure was contributable to user fees and co-payments.

There is much evidence that out-of-pocket financing is an extremely inequitable and inefficient method of financing. In some Asian countries, which are undergoing similar economic transition, out of pocket financing almost reached up to 60-70 per cent of their total health financing (WHO, 2003). In these countries medical expenses associated with ill-health are often catastrophic and frequently push low-income families into poverty. Policy makers in Mongolia seem to have a due concern that out-of-pocket payment for health care is widely used in recent years, because of the increasing number of private providers, unofficial and under-the-table payments in the public sector, and medical care obtained abroad. The newly constructed Mongolia's national health accounts aims to give an answer to this concern by capturing all health and medical care related expenses nationwide. Preliminary estimates as reported to WHO show that out-of-pocket payment in Mongolia is below 30 per cent, which means more than 70 per cent of the total health expenditure is still funded through government and social health insurance. There are no official reports, studies and evidences which show that health care costs in Mongolia impose a significant economic burden on the population and affect the livelihood of the poor and near-poor, low-income group.

Currently, the entire population is entitled to access outpatient and selected

curative cares offered at public health facilities without or with minimal co-payments. As regards hospital care, equity access is supported by health insurance. The insured patients are entitled to necessary health care according to their needs regardless of the amount of premium contribution and co-payments. This gives an assumption that the Mongolian health system provides the majority of the population equitable access to necessary health services and the poor and low-income population is relatively well protected from catastrophic health expenditure. However, more studies and evidence on access, health inequity especially among the urban and rural population, and utilization of health services are required to link them with the recent reductions in health insurance coverage among the population. The current health financing mechanism in Mongolia also needs to be studied further in terms of health system organization, management, efficiency and effectiveness in service delivery and quality of service to meet the growing demand and expectations. Mongolia has the potential to improve the whole health system financing and performance by utilizing fully all benefits of general taxation and social health insurance financing mechanisms, which is preferred by many countries with similar income level.

3. Summary and policy recommendations

Health insurance in Mongolia has been introduced to mobilize adequate financial resources for health without putting a significant economic burden on the population. The principles of social solidarity through risk sharing, fund pooling and cross subsidy have been successfully applied among the large population groups. Health insurance in Mongolia has resulted not only in increased participation of the population in health care financing, but also in sustained equity, access and effective financial protection for the vulnerable population from catastrophic medical expenses during the economic transition period. The recent government policy measures on reduction of the targeted subsidies for health insurance premium payment have resulted in decreased insurance coverage among the population. There are several reasons rather than inability or unwillingness to pay insurance premiums. These include a lack of administrative capacity to reach some population groups, poor management and professional skills in monitoring insurance benefits, consumer satisfaction and quality of services delivered.

The current situation requires more innovative approaches and actions including

effective and aggressive marketing of health insurance among the general as well as targeted population groups, for example, students, rural herdsmen and migrant population within the existing laws and regulations. Although the inpatient benefits are still the main priority in health insurance benefit coverage, the recent move on outpatient benefits has many strategic values. It will also affect dropouts, because outpatient benefits provide an opportunity for a larger number of the insured to experience the benefits of health insurance. Future policy changes are also required for the Mongolia health insurance scheme towards expansion of the health insurance benefit package to include ambulatory health services, extensive adoption of prospective payment mechanism such as capitation, and restructuring the insurance unit and premium collection basis from individual to household basis, along with strengthening of the current health insurance administration and management. It is expected that these recommendations will have positive impacts not only on overall improvement of health insurance operation in Mongolia, but also the performance of the health system and service quality, delivery with universal access and equity especially for the poor and vulnerable population.

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Table 1: Characteristics of the health insurance schemes in Mongolia, 2003

Characteristics	Compulsory social health insurance	Voluntary health insurance	Private insurance (New initiative)	Uninsured persons
1. Scheme nature **Model**	Social security Publicly managed	Voluntary Publicly managed	Voluntary Privately initiated and managed	Not applicable Voluntary out-of-pocket model
2. Population coverage, 2003	All employed in the public and private sectors, the low income and vulnerable including children under 16 years	Unemployed people in working age with ability to work	Target well-off population segments	Urban, rural migrant, marginal poor, traders, self-employed, employees in the informal sectors
Population (millions)	1.83 m	0.13 m	NA	0.55 m
% of total population in 2003	73.0%	about 5%		22%
3. Benefit package				
Ambulatory services	Selected services provided by public and private providers	The same benefit package as compulsory insured	Services abroad	-
Inpatient services	Nearly all necessary services provided by public and private providers	The same benefit package as compulsory insured	Services abroad	-
Choice of provider	Limited due to the referral system	Limited due to the referral system	Free	Free choice
Cash benefit	No	No	Yes	No
Conditions included	All	All	Selected	-
Conditions excluded	No	No	Publicly provided insurance benefits	-

Characteristics	Compulsory social health insurance	Voluntary health insurance	Private insurance (New initiative)	Uninsured persons
Maternity benefits	Provided free by the government	Provided free by the government	No	-
Annual physical check-up	No	No	No	-
Prevention, health promotion	No	No	No	-
Services not covered	Selected infectious diseases fully funded by the government and cosmetic surgeries, eyeglasses	The same as insured	No	-
4. Financing				
Source of funds	Contribution from employees, employers and subsidy from general taxation	Private contributions	Private contributions	Households
Financing body	Social health insurance agency	Social health insurance agency	Private business companies	-
Payment mechanism	Prospective output based payment	Prospective output based payment	Partly cash reimbursement	Fee-for-service at point of service
Co-payment	10-15% for inpatient and 50% for outpatient essential drug	10-15% for inpatient and 50% for outpatient essential drug	Yes	-
Expenditure per capita, 2003	231, 120 MT (US$ 210.11)	231,120 MT (US$ 210.11)	NA	-
Tax subsidy per capita, 2003	Government premium subsidy 800 MT per low income head	No	NA	NA

Note:1 US$ is equivalent to 1100 Mongolian Tugriks (MT).