



HEALTH FINANCING POLICY ISSUE PAPER

**Reaching universal coverage via social health insurance:
key design features in the transition period**

by

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January 2004

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Section 1: INTRODUCTION

Social health insurance (SHI) is one of the principal methods of health financing. Twenty-seven countries have established the principle of universal coverage via this method¹. Several low and middle-income countries are currently interested in extending their existing health insurance for specific groups to eventually cover their entire populations. For those countries interested in such an extension, it is important to understand what characterises a well performing SHI scheme and how long the transition from incomplete to universal coverage could be expected to take.

Section two introduces the concept of universal coverage, and the main pathways to this aim, so that policymakers keep in perspective options other than SHI for financing their health system. This is followed in section three by an analysis of the transition to universal coverage, based on historical experiences of a selection of countries that have mature or developed SHI schemes. In particular, this section discusses critical factors that can speed up the transition period. Section four then provides a simple framework for analysing the performance of a SHI scheme, based on the components of universal coverage and fundamental goals of a health system. A set of performance indicators will be presented that can be used to monitor and evaluate the progress in implementing SHI. Finally, we underline the government's strategic role in the implementation of SHI, and give concluding remarks in section five.

Section 2: DIFFERENT OPTIONS FOR REACHING UNIVERSAL COVERAGE

A question that remains of paramount importance in a majority of the world's countries is how their health financing systems can provide sufficient financial risk protection to all of the population against the costs of health care. The latter objective is tantamount to the aim of *universal coverage*, which is to secure access to adequate health care for all at an affordable price. That is, universal coverage incorporates two different coverage dimensions: health care coverage (*adequate* health care) and population coverage (health care *for all*). A crucial concept in health financing policy towards universal coverage is that of society *risk pooling* whereby all individuals and households share the financing of total health care costs. The larger the degree of risk pooling in a health financing system, the less people will have to bear the financial consequences of their own health risks, and the more they are likely to have access to the care they need.

There are essentially two main options for achieving universal coverage. One is a health financing system whereby *general tax revenue* is the main source of financing health services. These health services are usually provided by a network of public and contracted private providers, often referred to as a National Health Service. Secondly, there is *SHI*, which in principle involves compulsory membership amongst all of the population. Workers, self-employed, enterprises and government pay contributions into a social health insurance fund. The base for workers' and enterprises' contributions is usually the worker's salary. The contributions of the self-employed are either flat or are based on estimated income. Government may provide

contributions for those who otherwise would not be able to pay, such as the unemployed and low-income informal sector workers. SHI either owns its own provider networks, works with accredited public and private health care providers, or uses a combination of both. Within SHI, a number of functions (for example, registration, collection of contributions, contracting and reimbursement of providers) may also be executed by parastatal or non-governmental institutions, often referred to as sickness funds.

We do see countries, however, which use a mix of the two main options. Thus, there are *mixed health financing systems* that have some part of the population partially covered via general tax revenue, and clearly specified population groups only covered by health insurance. This insurance can be provided by one or a number of parastatal health insurance schemes that function according to SHI principles. Alternatively, a system of private health insurers may also be in place, but one that is subject to government regulatory powers, especially ensuring a specified benefit package of care.

Note finally that *within* each of the options referred to above, private health insurance can also play a supplementary role². It typically covers extra health care services that are not covered in a basic package of care (of one of the three systems described above), arranges for a reduction in waiting time, or covers some of the cost of patient co-payments. Indeed, in reality no health financing system is entirely financed by general taxation, SHI or the mixed health financing system described above. However, these options are useful for describing what is the principal method driving a health financing system towards universal coverage.

In this technical paper we focus on the development of SHI, especially in low- and middle-income countries, *given* that a choice is made in favour of this particular pathway. It will be supposed that the basic feasibility questions have been answered properly by the country that has made such a choice. This means that the country has analysed carefully the pros and cons of general taxation, SHI and a mix of the two as options for reaching universal coverage.

With regard to SHI, a number of conditions need to be satisfied and key questions need to be answered before a country can embark on its extension or establishment. These questions relate firstly, to the labour market. If the self-employed and informal sector workers dominate the labour market, how feasible is it to register and collect contributions from them? Furthermore, if payroll contributions are scheduled to occupy a major share of total SHI contributions, will they increase labour costs to such an extent that they will have a negative impact on employment? Secondly, is sufficiently skilled administrative staff present so as to build up and run the SHI institutions? Thirdly, will there be a legal framework that determines, among others, the objectives of the country's SHI scheme, the rights and duties of insured members, the roles and functions of the organization(s) that are operating SHI? Fourthly, is a health care infrastructure in place that will be able to provide the health services that are part of the SHI benefit package? Finally, is there a broad consensus among society's stakeholders (especially insured members and patients, health care providers and employers, Parliament and Government) to comply with the basic rules and regulations of a SHI scheme?³

In any case, given the many tasks in preparing and implementing SHI, countries that opt for this financing method are most likely to need to pass through a transition period. The next section will address important facilitating factors that can speed up this transition period, based on the experience in a selection of countries with developed SHI schemes. These factors will obviously have an impact on the performance indicators presented in section 4.

Section 3: TOWARDS UNIVERSAL COVERAGE VIA SOCIAL HEALTH INSURANCE: GENERAL FACTORS THAT EFFECT THE SPEED OF TRANSITION

3.1 Introduction

One can appreciate that achieving universal coverage may not be an easy process. Many countries that currently have a universal coverage system often needed decades to implement it. But if the choice is to take the path of SHI, several factors may be slowing down the process towards universal coverage. These factors are discussed in section 3.3 below.

In order to assess past experience on the transition to universal coverage via SHI, we use data about the evolution of the health insurance legislation in 8 SHI countries for which sufficient information was readily available. These countries are Austria, Belgium, Costa Rica, Germany, Israel, Japan, Republic of Korea (ROK) and Luxembourg⁴. We will pay attention thereby to the variety of organisational forms used during the transition period in those countries. In particular, the role of the voluntary character of sickness funds in the initial phases of SHI implementation will be highlighted.

The transition period was defined as the number of years between the first law related to health insurance to the final law voted to implement universal coverage. The numbers of years of transition are: 79 (Austria), 118 (Belgium), 20 (Costa Rica), 127 (Germany), 84 (Israel), 36 (Japan), 26 (ROK) and 72 (Luxembourg). It follows that the average number of years of transition is 70. We signal a caveat, however. Costa Rica's final law introduced the *principle* of universal coverage via SHI rather than effectively providing universal insurance coverage subsequent to this law. Also in Japan, the 1958 law on compulsory health insurance was implemented three years later. Hence, the average number of years of transition is somewhat underestimated.

It is not simply the total length of the transition period that is important, however. We also need to pay attention to evolution of the percentage of the population that becomes covered in this period. Furthermore, it should be borne in mind that extending coverage to certain population groups is more difficult than extending to other groups (such as is the case for casual workers and the self-employed). In other words, increased coverage is not necessarily a simple linear increase. Thus moving from, for example, 25-50% coverage might take less time than moving from 50% to 75%.

From time series data on population coverage, we see that in Austria it took 40 years (from 1890 to 1930) to move from 7% to 60%, but another 35-37 years (from 1930 to 1965-1967) were needed to extend insurance to farmers and civil servants, reaching 96% coverage. Likewise in Germany, coverage increased from 10% to 50% in 47 years (from 1883 to 1930). But another 58 years were needed to extend coverage to 88%, drawing in, among others, the self-employed workers to SHI. In Costa Rica, it took twenty years to reach a population coverage level of 17% (in 1961). But then only 5 years were needed to double coverage and thus to arrive at 34% population coverage (in 1966). The latter increase was an immediate consequence of the law of 1961 introducing the principle of universality. More than 10 years, however, were needed to again double population coverage; by 1978, the population coverage amounted to 74%. Subsequently, a population coverage level of 83.4% was obtained in 1991: thus, 13 years were required to add a further 10% of the population. Also in the case of Costa Rica, special efforts were needed to extend coverage to the self-employed and the poor low-income population, demanding ever longer time periods to systematically enrol these population groups.

3.2 Experience with the transition period: analysis of selected countries with developed SHI schemes

All of the 8 countries mentioned above followed an incremental approach. Yet, some took a longer time to develop their systems than others. Those with a fairly extensive transition period, above 40 years, are Germany, Austria, Belgium, Costa Rica, Israel and Luxembourg. Only Japan and ROK have known a transition period below 40 years. We now summarize the various stages that these countries experienced in the transition to universal coverage. These focus on important developments between the first law related to health insurance and the final law voted to implement universal coverage (as noted earlier, these laws mark the beginning and end of the transition period), although relevant stages preceding the first health insurance law are also described where information was readily available. In section 3.3 we discuss a number of factors that have facilitated the transition in the selected countries.

Germany

Three stages of incremental development⁵ prepared for Bismarck's introduction of SHI as a nation-wide and comprehensive system in 1883. Namely, in the late 18th century and early 19th century, laws were voted that set detailed rules on how voluntary sickness funds should be organized. These rules included provisions concerning contributions, the benefit package, entry conditions and fund management. In a second stage, in 1843, laws introduced the notion of compulsory membership. The right was given to local government to acknowledge existing voluntary funds and even to introduce compulsory membership in those funds. In 1849, it also became possible to make membership compulsory for specific employment groups. In a third stage, a number of laws became applicable at national level. The first compulsory health insurance law was that of 1854 when health insurance coverage became compulsory for all miners. It was a milestone in that it was the first law that covered the entire German territory for one professional group, with miners being required to become a member of one of the regional miners' health insurance funds.

Then followed an important landmark in 1883 when Bismarck introduced SHI for a larger number of professional groups. Initially the health insurance law of 1883 covered blue-collar workers in *selected* industries, craftsmen and other selected professionals⁶. It is estimated that this law brought health insurance coverage from 5% to 10% of the total population. Subsequent to 1883, the incremental approach to coverage continued by systematically bringing in different socio-professional groups into compulsory insurance. By 1910 and 1930, population coverage reached 37% and 50%. In 1950, insurance coverage was 70% of the population. One of the last laws enrolled artists and publicists into the SHI system in 1981⁷. By 2000, 88% of the German population was enrolled in the SHI system⁸. Population coverage by SHI is not 100%, as above a certain income level, one can opt out of the SHI system and insure on a private basis⁹.

Austria

A gradual approach as in Germany was adopted. A first Industrial Accident and Health Insurance scheme for enterprise workers was established in 1887-1888. Leading up to this scheme were the early regulatory provisions for employers to pay for hospital care and care of sick employees in the early 19th century. In 1859, an Industrial Code came to regulate the creation of benevolent funds and cooperative health insurance funds. However, so far these provisions and regulations had been mostly ignored. Then came the 1867 Associations Act that authorized the creation of association-based funds. As a result, the associations of the general workers' health and invalidity relief funds were established in 1868 and 1873, respectively.

The initial 1887-1888 scheme was further expanded in the early 20th century, by systematically enrolling all categories of white-collar workers, blue-collar workers and agricultural workers. The final expansion of coverage was in 1965 and 1967 with the Farmers' Health Insurance Act and the Civil Servants' Health Insurance Act, respectively. By 1980, a population coverage level of 96% was achieved. Note that there were 79 years between the first law in 1888 and the last major law, viz. the Civil Servants Health Insurance Act of 1967.

Belgium

In 1851, a special law officially acknowledged the sickness funds, often referred to as mutual health funds. These were based on different professional groups and were rather small-scale. Later on, in 1894, more extensive legislation provided the legal foundation of these funds for almost a century: a broader scope of activities was recognized while they could henceforth benefit from government subsidies. Subsequently, mutual health funds from the same political or ideological background combined into national alliances or unions.

Until the early 1940s, membership in these mutual health funds had been voluntary. After the Second World War, on 28th December 1944, a decree was adopted to make health insurance compulsory for all salaried workers. A National Fund for Sickness and Invalidity (embedded in a National Office of Social Security) would collect contributions and distribute them to the mutual health funds that would be in charge of administering compulsory health insurance. The next important steps were the laws of 1964, 1965, 1967, 1968 and 1969 that would expand compulsory health insurance

coverage to the self-employed (but for major health risks only), civil servants, the physically disabled, the mentally handicapped and the remaining uninsured, respectively. Thus, at the time of universal coverage, 118 years had elapsed since the 1851 Law.

Luxembourg

In 1901, compulsory health insurance was established for manufacturing and industrial workers. It was also inspired by the earlier 1883 Law in Germany. Health insurance developed, and by 1903, 73 sickness funds were operating. Later on, in 1925, legislation was introduced to regulate the health insurance sector that had become increasingly complex. As in other European countries, SHI further developed after the Second World War. The retired were the first new group to become covered. Then in 1952, health insurance became compulsory for civil servants and other public sector workers. In 1958, 1963 and 1964, compulsory insurance laws were introduced for the independent professions (businessmen, craftsmen etc.), the farmers and independent intellectual professions (doctors, architects, lawyers, etc.), respectively. By 1973, the whole population was covered by SHI. Thus, the transition period had taken 72 years since the first Law in 1901.

Israel¹⁰

A first health insurance fund, the Kupat Holim Chalit (General Sickness Fund), was founded in 1911 by a small group of agricultural workers. Later on, in 1920, this fund was taken over by the Histadrut (General Federation of Labour) and became one of its political power bases. Three other health insurance funds were established as well. At the end of 1948, 53% of the population was covered, with the majority (80%) being insured by the Kupat Holim Chalit. Health insurance was expanded significantly after that time, even though it was not compulsory. By 1995, 96% of the population was insured. In that same year, the National Health Insurance Law was voted, confirming the compulsory insurance and the duty for every resident to register as a member in one of the existing funds. The lapse of time since the first health insurance fund in 1911 was therefore 84 years.

Costa Rica

This country¹¹ initiated its SHI system via the establishment of the Costa Rican Social Security Fund¹² (CCSF) in November 1941. At first, the urban population was targeted, as well as the population from certain coffee producing zones such as from the 'Valle Central', with membership in principle compulsory for these population groups. An important characteristic was that initially, only the insured worker was the beneficiary of SHI. However, already in 1944, when extending SHI to other zones such as the Valle de Turrialba, there were pressures to have all family members covered. It was in 1956 that family coverage was introduced on a compulsory basis, including coverage for spouse or companion, children younger than 12 years old and parents if they were also dependants in the insured worker's family.

Another important event occurred in 1960 when a regulation more than doubled the maximum taxable earnings. So far, SHI had focused on the protection of low-income

workers. However, the 1960 regulation permitted, among others, an important increase in contributions and an extension of SHI benefits. In addition, in 1961, legislation was accepted with its intention to extend SHI to all of the population. Thus, there were 20 years between the establishment of the CCSF in 1941 and the 1961 law. The 1961 law meant that also self-employed workers and indigent were to be incorporated into the SHI scheme. In fact, the Costa Rican Parliament fixed a 10-year time period to achieve nation-wide coverage. The latter target has so far not been reached, however. But note that by early 1990, 29 years after the law of 1961, 85% of the population was effectively covered by the SHI.

Japan

At the root of SHI is the very early development of voluntary community health insurance schemes in the early nineteenth century. In 1835, a community health insurance scheme¹³ (having rice as prepaid contributions and basic care as the main benefit) was established in Fukuoka Prefecture. In later decades this type of mutual health association grew in importance. In the 1930s, Government encouraged the replication of community health insurance at a national scale. In 1934-1935, 12 models of community health insurance were already established in three prefectures. However, in 1938 a broader 'National Citizens Health Insurance' Law, based on community financing principles, but with cash-based contributions, was proclaimed and implemented. This Law was designed to meet the needs of the poor in under-served rural villages, the farmers and self-employed in rural communities and small companies. It was also initially run on a voluntary basis. Still, this particular Law contributed significantly to insurance coverage, namely in increasing coverage from 2% to 51.2% of the total population¹⁴.

As far as employees are concerned, a major law was voted in 1922, establishing compulsory insurance for selected groups of workers. This was the first law passed related to health insurance. Employee health insurance together with the National Citizens Health Insurance covered 60% of the whole nation by 1945¹⁵. In the post-WWII period, these two types of insurance expanded to cover 90% of the population. Legislation, establishing compulsory insurance for all, was finally adopted in 1958 and fully implemented by 1961. Hence, only 36 years had passed since the first law in 1922.

Korea

In 1963, a Health Insurance Act was passed, triggering the move towards universal health insurance coverage. Health Insurance remained voluntary until 1977, however. Several voluntary health insurance societies were organized on a pilot basis, covering at most 0.2% of the population.

From 1977 on, compulsory insurance was established sequentially for the various professional groups in the country. In that same year, employees' health insurance became compulsory for employees (active in companies with 500 employees and above) and their dependants. Subsequently, coverage was systematically extended. In 1979, coverage became compulsory for workers (and their dependants) active in firms with a minimum of 300 workers. Government officials and private school teachers were compulsory insured in this year as well. Then in 1981 and 1983, the coverage

was extended to workers in firms employing at least 100 and 16 workers, respectively. A final stage followed in 1981 with demonstration programmes for self-employed health insurance in selected rural and urban areas. Finally in 1988 and 1989, health insurance became compulsory nation-wide for the rural and urban self-employed, respectively. Thus, the transition period had lasted 26 years since the enactment of the initial 1963 Health Insurance Act.

Summary

In all the countries studied, the move towards full SHI coverage for each country has been an incremental process, with systematic expansion of population coverage over the transition period. The organisational arrangements introduced to achieve this expansion have been different, however. They ranged from the steady expansion of membership in multiple sickness funds, initially run on a voluntary basis, to extension of membership steered by a government-driven central health insurance organisation. Also note that the speed of transition has varied from country to country.

Table 1 on the following page summarizes the main stages in the extension of SHI for these countries, based on key legislative changes, after which the analysis moves onto the factors that helped facilitate this transition:

Table 1: Summary of the transition period for selected SHI countries

	Speed of transition	Important stages in the extension of social health insurance – legislative timeline
Germany	1854-1988 (127 years)	<ol style="list-style-type: none"> 1*. Voluntary relief funds (early-mid C19th) established. 2*. Compulsory membership within health insurance funds (1843); for specific employment groups (1849). 3. First law passed at national level, making health insurance compulsory for all miners (1854). 4. SHI becomes a nationwide, comprehensive system (1883), with systematic enrolment of different socio-professional groups (until 1988).
Austria	1888-1967 (79 years)	<ol style="list-style-type: none"> 1*. Regulatory provisions for employer-based care (early-mid C19th). 2*. Creation of association-based funds authorized (1867). 3. Industrial accident and health insurance scheme (1887-8), with systematic enrolment of different socio-professional groups (until 1967).
Belgium	1851-1969 (118 years)	<ol style="list-style-type: none"> 1. Mutual health funds for different professional groups officially acknowledged (1851). 2. Funds subsidized by government (1894), with national alliances or unions formed between funds. 3. Health insurance made compulsory for all salaried workers (1944), with extension to remaining non-covered groups (1964-9).
Luxembourg	1901-1973 (72 years)	<ol style="list-style-type: none"> 1. Compulsory health insurance for manufacturing and industrial workers (1901). 2. Extension to retired (post WWII), civil servants / other public sector (1952), further socio-professional groups (1958-64).
Israel	1911-1995 (84 years)	<ol style="list-style-type: none"> 1. Health insurance fund – Kupat Holim Chalit – for some agricultural workers (1911). 2. Three further health insurance funds established in this period.
Costa Rica	1941-1961 (20 ¹ years)	<ol style="list-style-type: none"> 1. Social security fund – CSSF – mainly for urban population and certain coffee-producing zones established (1941). 2. Compulsory family coverage for insured (1956). 3. Increased contributions and benefits (1960). 4. Extension to remaining population accepted (1961), with intended systematic enrolment of these non-covered groups over a 10 year period. 5. Effective enrolment of 83.4% by 1991.
Japan	1922-1958 (36 ¹ years)	<ol style="list-style-type: none"> 1*. Voluntary community health insurance schemes (CHIs) developed (early C19th). 2. Compulsory insurance – Employee Health Insurance – for selected groups of workers (1922). 3. CHIs replicated at national scale (1930s), mainly for the poor in rural areas, farmers, self-employed and small companies, culminating in National Citizens Health Insurance Law (1938). 4. Simultaneous expansion of both of the health insurance schemes (1944-1958).
ROK	1963-1989 (26 years)	<ol style="list-style-type: none"> 1. First Health Insurance Act passed (1963), with several voluntary health insurance schemes piloted (1963-77). 2. Compulsory for workers and their dependants for firms with 500+ employees (1977); firms with 100+ employees (1981); firms with 16+ employees (1983). 3. Extension to remaining population, such as self-employed (until 1989).

* Stages marked with an asterisk *preceded* the first health insurance law.

¹ It should be noted that in the case of Costa Rica, universal coverage was not effectively implemented subsequent to the 1961 Law. In Japan, effective implementation of universal coverage via SHI was in 1961.

3.3 Facilitating factors that speed up the transition to universal coverage

3.3.1 An Overview ¹⁶

We submit that a number of factors can in principle enhance the speed to achieving universal coverage via SHI. First, there is the general *level of income* available to the country. A greater amount of income per capita is apt to increase the capacity of enterprises and citizens to prepay SHI contributions. In addition, tax revenues are likely to increase with income, facilitating the subsequent channelling of any government subsidies into SHI. Steady economic growth therefore is likely to enhance this capacity to prepay¹⁷.

Secondly, the *structure of the economy* also matters. What is most relevant here is the relative size of the formal and informal sector. Many developing countries do have important agricultural, manufacturing and service sectors with a notable part of employment being informal. Such countries then are likely to face administrative difficulties in assessing incomes and collecting contributions because so many workers do not receive a formal salary. This may hamper provision of health protection for the informal segment of the population, especially when a SHI scheme would rely significantly on household contributions.

Third, administrative costs may be influenced further by the *distribution of the population*¹⁸ that one intends to cover. The population in urban areas, where there is likely to be at least a minimum quality of infrastructure and communications, and high population density, is likely to be easier to serve by a SHI system than a widely dispersed rural population.

A fourth factor is the country's *ability to administer*. The establishment of a SHI scheme requires a sufficiently skilled labour-force with capacities in bookkeeping, banking and information processing. Secondary and tertiary education should ideally respond to such training needs. Related markets, such as in financial services, other insurance businesses and even well-established community health insurance schemes, can also provide appropriately trained personnel. Further, their staff can be called upon to be involved in training and general capacity building of SHI staff.

The fifth factor is the level of *solidarity* within a society. A society with a higher level of solidarity is interpreted here as being a society whose individuals are more willing to support other individuals. A system of full financial protection requires a significant amount of cross-subsidization, both from rich to poor and from low risks to high risks. Each country needs to define what is an appropriate level of solidarity to enable such cross-subsidization. Policy-makers can, at times, impose solidarity, but a sufficient degree of innate solidarity in society is needed in order to implement and sustain the cross-subsidization inherent within SHI.

Finally, the five facilitating factors discussed above may be present to a lesser or larger degree, but it will still take government's *stewardship* to launch and guide a process that leads to compulsory health insurance for all. One important element of governmental stewardship is to allow the various stakeholders and the population at

large to have a voice in social policy making. Open political debate and availability of financial information helps the population to gain *trust* in government and other agencies involved in SHI implementation. It is therefore warranted that the contributors to SHI, the providers and the population (for example through community and professional associations) interact with decision-makers on the design of SHI.

We will refer to the relative importance of these factors for the eight SHI countries analysed in the discussion below.

3.3.2 Application to the experiences from the selected countries with developed SHI schemes

Level of income

It is interesting to note that health insurance in all eight of these countries started when they were lower-middle income countries. In Germany, Gross Domestic Product (GDP) per capita was 2,237 US\$ at the time of Bismarck's 1883 law. The Austrian GDP per capita was 2,420 US\$ when the 1887-8 Industrial Accident and health insurance scheme for workers was established. In Belgium, at the time of the official recognition of the mutual health funds in 1851, GDP per capita was 1,808 US\$. Even in Japan and ROK, where the transition period was considerably shorter, GDP per capita were at similar levels. In Japan, GDP per capita was 2,140 US\$ around the time the Health Insurance Law for workers was enacted in 1922. In the ROK, whilst income level per capita was quite low at the passing of the first health insurance law, namely 209 US\$ per capita, in 1977 when the 'compulsory' period started, Gross National Product (GNP) per capita was 1,012 US\$.

Furthermore, economic growth was either high or at least steady for each of these countries during the transition period. In Belgium and Germany, GDP per capita had more than quintupled by 1970, whereas Austria's GDP per capita had quadrupled. These countries had therefore developed a substantial economic capacity since the mid-19th century, facilitating the financial build-up of the SHI. In Costa Rica, economic growth in the fifties was quite high and reached GDP growth rates up to 7%. This is reported to have strengthened the initial development of SHI in this country¹⁹. Concerning Japan, its income growth was steady although not spectacular, at about 2.9% between 1920 and 1940. Between 1940 and 1961, GDP had continued to grow though modestly at an average growth rate of 1.75% per year. Still, by 1961, GDP per capita had progressed to 5,150 US\$ or more than double the GDP per capita amount forty years earlier. Korea's annual growth rate was much higher, at 13.3%. By 1989, when universal coverage was achieved, GNP per capita had more than quadrupled in 12 years and had become 4,994 US\$.

Structure of the economy

It is evident that in the Western European and Asian countries analysed, these all experienced growing formal sectors during their transition periods. This enabled these countries to enhance the enrolment of workers in a systematic way, including workers in mining and industry, but also workers in the agricultural sector. For instance, in

Germany, agricultural and forestry workers were already covered by 1911. And in Korea, it has been recognized that the high growth phenomenon rapidly changed the *structure* of the economy, and that the growing formal sector of the economy has been instrumental in SHI development²⁰.

Distribution of the population

Strengthening of the formal sector in the countries studied is also seen to be correlated with a growing urbanisation and an increased population density. Administrative cost savings can be realized from this particular evolution, especially as a result of greater efficiency in identifying and registering SHI members and in the subsequent collection of contributions. Note for example that in the ROK, the urban population was 36.6% of the total population in 1966 (3 years after the introduction of voluntary health insurance). This percentage climbed to 48.4% in 1975 (two years before SHI became compulsory). And in 1980, the urban population was already 57.3% of the total population²¹. We submit that such evolution has also contributed to the notable speed of transition to universal coverage in the ROK.

Ability to administer

Related to Germany's experience, it is argued that the voluntary relief funds that preceded the initial compulsory health insurance laws 'had served as an apprenticeship stage for the development of skills in the insurance administration and actuarial science at the level of the fund as well as in insurance regulation at the level of government'²². A similar interpretation is likely to be valid for the other countries where voluntary funds were operating before the first official laws. In the ROK, the availability of well-trained middle management workers was instrumental in expanding the SHI²³.

Solidarity

Regarding the impact of *solidarity*, the fifth factor, a similar argument to the fourth factor of ability to administer can be made. The initial voluntary schemes in Germany can be interpreted as 'learning models for solidarity' that facilitated the establishment of or participation in larger schemes, or that helped compliance with compulsory arrangements. It should also be said that the solidarity achieved was backed up by an important build-up of *trust* among insured members in the management of the voluntary schemes. In some cases, political or ideological affiliation also helped to achieve larger schemes. For instance, in Belgium, mutual health funds with the same political or ideological background merged into 5 national unions at the beginning of the 20th century.

Stewardship

We submit that the capacity of governments to make health insurance compulsory is crucial for arriving at a mature SHI system. Strong *stewardship* on the part of governments is therefore needed. Governments have surely exemplified *stewardship*, although in perhaps different ways and in different periods of time. In Germany, Bismarck made a first move towards universal coverage with the 1883 Health Insurance Law, and built upon the experience of voluntary schemes in earlier decades.

In Belgium, the Government also stimulated the target of universal social protection by officially recognizing the mutual health funds in 1851. In 1894, the scope of the activities of mutual health funds was legally extended, by awarding them the right to claim government subsidies. Such positive governmental actions were not always uniquely spurred by a sheer interest in population welfare, however. Politics have often played a role. For instance, it is recognized that Bismarck used this law to counteract the political weight of workers and trade unions so as to strengthen the German State²⁴. Also in Austria²⁵ and Japan²⁶, the rise of the workers' movement in the beginning of the 20th century pushed forward the extension of SHI.

Still, on the whole, it is accepted that, especially in the aftermath of the Second World War, significant improvements in health insurance were planned by governments having the public interest in mind. In Belgium, Germany and Austria, stewardship was built in a significant way on *consensus*, giving voice to concerned actors and finding a balance between their interests.

The SHI history in *Belgium* has been characterized from the beginning by consensus building between employers and employees. For instance, in 1943 a draft Agreement on Social Solidarity was signed between employers and trade unions. The latter was the precursor of the decree of 28th December 1944 that established social security for workers. The latter also recognized the importance of the health insurance funds in the running of the system. Employers' organizations, trade unions and health insurance funds continue to have an important stake in its management. They are represented, now joined by the organizations of the self-employed, in the management board of Belgium's SHI agency.

In the case of *Germany*, it should be noted that statutory health insurance funds and provider organizations have historically been instrumental in SHI development. They are autonomous and 'self-governing' institutions though under a general supervision of the government. Over the past decades, these institutions with their regional base were gradually drawn into a more centralized process of decision making, through federal committees and negotiations. Germany's federal government in turn has enhanced its role in health policy; for instance the federal Ministry of Health had an important impact on the establishment in 1993 of the risk equalisation system²⁷.

Austria has a similar experience as that of Germany with health insurance funds being self-governing bodies that negotiate contracts, health service benefit packages and provider payments with professional provider bodies. However, the federal government maintains its responsibilities for legislation and implementation²⁸.

In *Japan*, social protection has been explicitly part of Government policy. In fact, the postwar Constitution of Japan determined that the state 'shall use its endeavours for the promotion and extension of social welfare and security, and of public health'²⁹. Thus, this constitution provided the basis for the establishment of social security in postwar Japan. Still, the latter did not mean that governments intervened unilaterally in the field of health. Rather, health policy has been characterized by a pragmatic attitude on the part of Government. One can refer to 'the art of balance in health policy', whereby a balance is achieved between well-established interest groups³⁰, especially Japan's Ministry of Health and Welfare (with its interest in management of

health care) and the Japan Medical Association (with its interest in professional autonomy)³¹.

In *Israel*, stewardship was shown, among other actions, by the implementation of a major health financing reform in 1995. Although 96% of the population was covered by 1990³², and this despite membership being voluntary, from the eighties there appeared to be growing public discontent with the system by both the population and providers (including complaints about long queues and under-the-table payments). In addition the largest health insurance fund encountered severe financial problems, with smaller funds engaging in cream skimming. The government then asked the Supreme Court to appoint a five-member State Commission of Inquiry into the Israeli Health-care system in June 1988. One of the most important recommendations in the Commission's report (submitted in August 1990) was to introduce a National Health Insurance Law that would enrol every citizen and determine a legal framework for financing and provision of health care. A National Health Insurance Institute would collect contributions and then distribute those via capitation payments to the various health insurance funds. This law was then passed in 1995 and served several key objectives. A first objective was to give the state the responsibility to provide health services for all residents; the second to be clear on the population's entitlements to care; the third to institute the obligation to accept every insured, whatever his risk of illness, so as to avoid cream skimming³³. It also took important political skills from top leaders³⁴ of the Histadrut, Israel's General Federation of Labour, to support a universal health insurance law that implied a de-linking of the Kupat Holim Chalit sickness fund from the Labour Federation, and whereby unionised workers would be able to register in another health insurance fund.

Through analysis of the experience in eight countries with developed SHI schemes, this section has shed light on what are important facilitating factors for the speed of the transition period. The following fourth section of the paper analyses what characterises a well performing SHI scheme. This is essential to ensure that the transition to universal coverage is a complete process, complete in the sense that there is secure access to basic health care for all at an affordable price.

Section 4: CHARACTERISTICS OF A WELL PERFORMING SOCIAL HEALTH INSURANCE SCHEME: KEY DESIGN FEATURES

4.1 A framework of analysis: a two-stage evaluation

4.1.1 Introduction

The implementation of SHI will require substantial preparation and merits important and continued attention. For a digression on the various tasks to be accomplished, we refer to earlier guidelines on SHI: ‘Social Health Insurance: a guidebook for planning’³⁵ and ‘Planning and Implementing Health Insurance in Developing Countries: Guidelines and Studies’³⁶.

The design of the SHI scheme is one of these important tasks, and the focus of this paper. In particular, we focus on key design issues, using a simple framework to monitor the performance of a SHI scheme once it starts the process of implementation³⁷. As the implementation may take several years, the performance framework with its set of indicators presented below will assist in assessing progress with implementation.

The performance of a SHI scheme – or indeed any type of health financing system – can be evaluated in a two-stage manner. In a first stage, one can assess the performance of SHI in terms of pure ‘health financing’ elements: collecting financial resources, allocating these resources and guaranteeing a specified benefit package. Very broadly, these elements are associated with the often-cited objective of ‘universal coverage’.

However, whilst universal coverage is a central policy objective of health financing schemes, its components need to be further scrutinized. For instance, a SHI scheme that has achieved eighty per cent population coverage but that has only a limited positive impact on the population’s overall health status does not seem to be a well performing scheme. This could be, for instance, because the benefit package lacks cost-effective interventions, or because access is limited by high co-payments. That is, such a scheme has high population coverage but does not have a high health care coverage.

In a second stage, this performance of a SHI scheme in terms of health financing elements is linked with SHI’s impact on the so-called final goals of a health system, viz. health, equality in health, responsiveness, equality in responsiveness, and fairness in financing. The next section gives further details about this two-stage evaluation framework.

4.1.2 Targets of a social health insurance scheme and their impact on the final goals of the health system

The WHO recently defined the purpose of health financing schemes as follows: “the purpose of health financing is to make funding available, as well as to set the right financial incentives for providers, to ensure that all individuals have access to effective public health and personal health care³⁸”. That is, a well performing health financing system, and by the same token a well performing SHI, should have the following targets:

- (i) to generate sufficient and sustainable resources for health;
- (ii) to use these resources optimally (by modifying incentives and through appropriate use of these resources);
- (iii) to ensure that everyone has financial accessibility to health services.

The first stage evaluation relates to these three targets, with key design issues established through which performance is analysed. We return to these key design issues in detail in section 4.2.2.

In a second stage, the performance of a SHI system should be assessed with respect to the final goals of a health system. First, *health* is the primary or defining goal of a health system, and both the overall health status of the population and the distribution of health amongst the population are important. However, non-health outcomes are also important. *Responsiveness to people’s (non-medical) expectations* and the *fairness in financial contribution* are also recognized as important final goals of the health system³⁹. These three health system goals are used as the basis for the framework of analysis adopted⁴⁰.

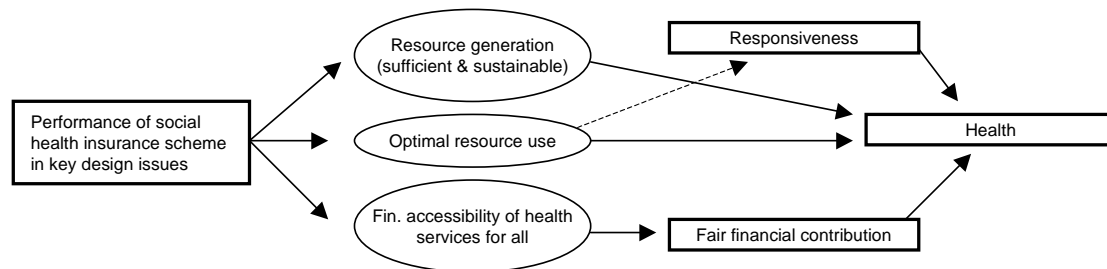
A responsive health system ensures that persons are treated with sufficient respect, and that the system is sufficiently client-oriented⁴¹, with no distinction made between different population groups. Financial contributions are considered fair when health expenditure is distributed according to ability to pay rather than to the risks of illness, and should ensure that everyone is financially protected from this risk. These final goals of responsiveness and fairness in financial contribution also impact on the primary goal of health, as well as being important in their own right.

Thus, in a second-stage evaluation, SHI schemes should ideally be evaluated in relation to these final health system goals. Indeed, methods have been designed to quantify health systems’ achievement at the national level with respect to each of these goals⁴². Most directly, a well-designed SHI scheme should be an effective way of realizing the goal of fairness in financial contribution, as SHI shares risks and acquires its funds according to ability to pay. But SHI, as with any kind of health financing scheme, also impacts on both the distribution and overall health status of a population, by providing resources for health and shaping how these resources are used. Finally, a good SHI scheme can have a positive effect on the responsiveness goal, by altering the incentives faced by health care providers.

In the following diagram, we depict first in the rectangle, reading from the left-hand side of the diagram, the performance of a SHI scheme. How well the scheme performs in a number of key design issues will be expanded upon in section 4.2, where a

number of performance indicators are proposed. These performance indicators will indicate how well the typical financing targets are achieved (first stage evaluation). We proceed by illustrating the link between these targets and the final health system goals (second stage evaluation).

Diagram 1: Social Health Insurance - financing targets and final health system goals



The arrows indicate how the performance of a SHI scheme impacts upon the final goals of the health system (the dotted arrow showing a weaker relationship), illustrating the link between the first and second stages of evaluation. Subsequently, we will only develop in detail the first stage of performance evaluation. This first stage is very close to the financial and administrative aspects of SHI implementation, and is likely to be of immediate use to those who have administrative responsibility concerning the development of SHI.

This is not to say that the second stage evaluation is less important. However, given its analytical complexity, it requires a separate and complementary enquiry. For instance, health and health equality depends on factors beyond health financing, such as the level of economic development and a number of socioeconomic and epidemiological characteristics. Likewise, responsiveness may also depend on factors that go beyond the health financing system. Thus, one will need to carefully establish workable methods so that any ‘net’ impact of SHI on health system goals can be identified. The latter will not be pursued in this paper, however.

4.2 Focus on the first stage of performance evaluation

4.2.1 Social health insurance and the health financing sub-functions

First note that the numerous aspects of a health system can be classified into four broad and inter-related functions. These are the provision of health services; the creation of resources (through investment and training) to provide these services; health financing; and stewardship or oversight of the health system⁴³.

These are important to bear in mind when considering the performance of SHI schemes, especially the stewardship aspect, and the government’s stewardship role will be returned to briefly in section 4.3. However, the focus here is on the health

financing function of SHI. Our analysis will be aided by distinguishing three interrelated sub-functions of health financing: revenue collection, pooling and purchasing. The performance indicators to be proposed can be classified within these sub-functions.

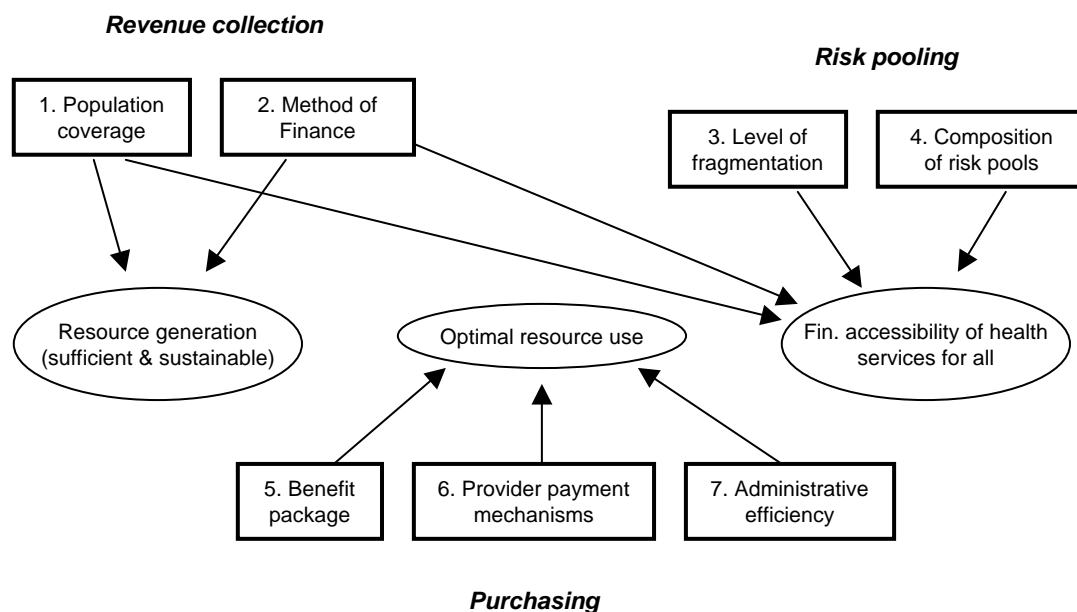
Revenue collection can be defined as the process by which the health system receives money from households, enterprises, government and other organizations including donors⁴⁴. *Pooling* is the accumulation and management of these revenues in order to spread the risk of payment for health care amongst all members of the pool; and thus individual persons no longer bear their risk on an individual basis⁴⁵. *Purchasing* is the process by which these pooled contributions are used to pay providers to deliver a set of specified or unspecified set of health interventions. Purchasing can be either passive or strategic, with passive purchasing simply following predetermined budgets or paying bills when presented. Strategic purchasing is generally preferred, as it is where there is a continuous search for purchasing the best health services, how to purchase them and from whom⁴⁶.

In the next section, the key design issues related to each of those health financing sub-functions are further defined.

4.2.2 Performance in key design issues: an overview

Seven key design issues are developed in this section, evaluating SHI in terms of the health financing sub-functions of revenue collection, pooling and purchasing. The following diagram introduces them (presented in rectangles), and their relationship with the three targets defined in section 4.1.2:

Diagram 2: Key design issues in the health financing sub-functions



To evaluate performance in each of these seven key design issues, we define where possible easily measurable performance indicators. In addition, we discuss further performance aspects that are important in relation to each of these design issues. A summary of performance evaluation in these key design issues is provided in Table 2.

Table 2: Overview of performance in seven key design issues

<i>Revenue collection</i>		
1. POPULATION COVERAGE		
- overall / macroeconomic level	Percentage of population covered by SHI	What scope for direct government subsidies?
- by specific population group	Coverage by socioeconomic group*	
2. METHOD OF FINANCE		
<i>a) Extent of prepayment</i>		
- overall	Ratio of prepaid contributions to total health care costs	Different sources of funds: - Payroll taxes versus mix of revenue sources Are contributions flat-rated or income-rated?
- by specific population group	Prepayment ratio by socioeconomic group*	
<i>b) Protection against catastrophic expenditure</i>		
- overall	Percentage of households with catastrophic spending	
- by specific population group	Catastrophic spending by socioeconomic group*	
<i>Risk pooling</i>		
3. LEVEL OF FRAGMENTATION	Multiple risk pools? If yes, are there risk equalisation measures in place?	Single versus multiple funds: - Single funds: level of decentralization - Multiple funds: member characteristics of different funds, with varying contributions & benefits? Competition amongst funds?
4. COMPOSITION OF RISK POOL/S	Is membership compulsory?	What unit of subscription?
<i>Purchasing</i>		
5. BENEFIT PACKAGE	Are monitoring mechanisms – patient appeals mechanism, information on claimant rights?, peer review committee and claims review – in place?	Nature of contract between provider and SHI fund. How to reflect efficiency and equity criteria within the benefit package?
6. PROVIDER PAYMENT MECHANISMS	<i>...see further design issues...</i>	Do provider incentives encourage cost containment and provision of good quality care?
7. ADMINISTRATIVE EFFICIENCY	Percentage of expenditure on administrative costs	Budget caps; exclusion of low-cost interventions from benefit package.

* this is defined in section 4.2.3 below.

4.2.3 Seven key design issues: an in-depth analysis

Revenue collection

1. POPULATION COVERAGE

For a country that has chosen the pathway of SHI to approaching universal coverage of health care, a key design issue is the level of population covered by the SHI scheme. This is important for enabling greater financial accessibility to those covered by SHI, as well as generating resources for health.

PERFORMANCE INDICATORS

- Percentage of population covered by SHI

An immediate performance indicator for this design issue is the percentage of population covered by the scheme. Higher percentages obtained through time are associated with better performance, *everything else being equal*.

There is an important caveat, however, in the interpretation of this ratio. Factors related to the structure of the economy will also impact on the level of population coverage. For instance, it is typically administratively easier to collect contributions from employees in the industry, mining or services sector than from self-employed farmers or other self-employed. Hence economies with a larger industry, mining or services sector are likely to have a higher percentage of the population covered by SHI from the start. An example is if one country has 60% of its population covered by SHI, whilst another country has only 15% coverage, yet both are covering the entirety of employees. This difference is largely due instead to differences in the underlying structures of the two countries' economies.

To enhance the understanding of the evolution of this ratio, we thus propose to add indicators related to different population groups.

- Coverage by target group

It follows from the discussion above that an analysis of coverage by population group, rather than simply inspecting the percentage of the population covered, is important to reach a better understanding of the performance of a SHI scheme. To measure this, we use the following classification, based on typical groups for SHI membership:

- 1 = civil servants (including teachers, police and military personnel)
- 2 = employees of private and public enterprises
- 3 = self-employed professionals
- 4 = casual and migrant workers, agricultural workers and other self-employed
- 5 = retired civil servants and employees
- 6 = selected groups of the non-working population (e.g. students, disabled, unemployed)

Note that each time, dependants are included in the various categories. In addition, additional categories could be considered if these are important in a country's specific context. For administrative purposes and ease of registration, one may want to identify first the employees belonging to enterprises with a minimum number of employees. In the Republic of Korea, for example, SHI coverage started in 1977 with employees of large corporations with more than 500 workers. From 1977 on, coverage was gradually extended to employees of smaller corporations^{xlvii}. One may also include a monitoring of the coverage of the people in the different categories above, by region or province.

FURTHER PERFORMANCE ASPECTS

Whilst maximizing the percentage of the population covered by SHI is an important performance objective for those countries choosing this pathway to universal coverage, it is important to understand that this process may take some time. Here, the performance indicator of coverage by target group reflects one important reason for why high or universal population coverage will be difficult, in demonstrating that certain population groups are administratively easier to cover than other groups. Indeed, some extensions are easier than others. For instance, an extension in coverage relatively easy to realize is that of health insurance coverage for dependants who were hitherto not covered. Note that at the time of the introduction of SHI in Colombia in 1993, only 20.6% of the total population were affiliated to social security. Four years later, 53% of the population was enrolled. But a significant part of the increased coverage can be explained by the enrolment of family members of formal sector workers already previously insured^{xlviii}.

It is not merely the structure of the country's economy, though, that explains coverage in the different target groups. The policy maker must also decide what scope there is for cross-subsidization, benefiting particular groups. Eligibility to SHI benefits is generally based on contribution to the scheme. Yet the percentage covered can exceed the percentage contributing *if* the government establishes arrangements to finance the insurance membership of certain population groups, such as the poorest who otherwise would not be able to afford membership. This implies a certain cross-subsidization as such payments will be financed via general tax revenue and/or transfers from those insured who fully contribute. The scope for cross-subsidization depends on the level of *solidarity* in the society, an issue that was discussed in section three.

2. METHOD OF FINANCE

How SHI is financed is important for ensuring financial protection against health care costs, and hence better financial accessibility of health services for all. But it is also important that the health care payment mechanisms used generate both sufficient and sustainable revenues for the SHI scheme to function as desired.

PERFORMANCE INDICATORS

a) Extent of prepayment

- Ratio of prepaid contributions to total costs of the SHI benefit package

Health care can be paid for either through out-of-pocket payments or through some system of prepayment. Prepayment is always preferred to out-of-pocket payments in terms of improving financial accessibility to health care. Indeed, out-of-pocket spending restricts access to only those who can afford it, and is likely to exclude the poorest members of society^{xlix}. That is, it offers better protection against the uncertain financial consequences of health care. Such protection is desirable when people are risk averse. In addition, government might introduce this universal financial protection out of a concern for equity in society.

In countries with a SHI scheme, the level of prepayment effects how accessible the SHI benefit package will be. In particular, such a benefit package may be broadly defined, but co-payments may be so high that access to a number of health services is hampered. Prepayment is also preferable to out-of-pocket payments as it is a precondition for pooling of risks amongst people, and indeed in SHI schemes, prepayment is combined with risk pooling. Measuring the performance in terms of pooling is undertaken later in this section.

Thus a higher ratio of prepaid contributions to the costs of the insured and utilized health services of the SHI benefit package suggests a better performing SHI scheme. There are two major caveats, however. First, there is a concern about the adequacy of the benefit package. For example, the prepayment ratio may be very high, yet the benefit package may be very restricted. Clearly this is not ideal, as many households may still be left to pay important health care bills or they simply do not gain access to certain health services because of incapacity to pay. Therefore a high ratio of prepaid contributions to the total cost of the SHI benefit package is only indicative of good performance *if* at the same time the SHI benefit package offered is comprehensive. Indeed, in this case, the prepayment ratio to total health care costs of the whole health sector will also be high. A comprehensive package is generally comprised of outpatient care (primary care, selected specialist services, essential drugs) and inpatient care (including essential drugs and ancillary services, such as laboratory tests)^l.

Secondly, the caveat of *moral hazard* should also be considered. An important degree of prepayment combined with risk pooling may result in some individuals being entitled to more health care than they have paid for. In the extreme, this leads to 'free' health care at the point of consumption. The theory of moral hazard then suggests that individuals may have an 'excess' demand for health care, as they are confronted with a subsidized price once they need health care^{li}. Some submit that moral hazard is not that marked in health, as one should expect people to prefer being healthy to demanding care. However, moral hazard retains its importance as once sick, people may want to obtain as much care as possible^{lii}. Also, when there are no financial barriers to demand health care at the various levels of the health care system, households may want to bypass the lower echelons and demand care from more specialized facilities. Further, there may be misuse of the system, for instance, when pharmaceuticals prescribed to insured patients are sold for private gain. Solutions to counteract moral hazard behaviour are based on maintaining some level of

co-payments. One may also assign a gatekeeper role to certain providers, whereby access to higher echelons of the health care system is given in case of need. Assigning important co-payments to those who do not respect the referral system could reinforce this. For these reasons, a complete (100%) maximization of the prepayment ratio is not necessarily the best policy. Note for example that in most European SHI systems, co-payments for health services up to 30% are quite common; higher co-payments are even noted in the case of certain categories of pharmaceuticals^{liii}.

Nevertheless, in this analysis, a higher prepayment ratio is associated with a better performing scheme, because it helps ensure better financial accessibility for all. It is not possible to give one precise prepayment ratio to strive for, though. Indeed, the need to take account of moral hazard may differ across countries, resulting in different levels of co-payments and thus different prepayment ratios. In addition, the prepayment ratio may depend upon a country's income level. For instance, high-income SHI countries may decide to introduce higher levels of co-payments for certain health services, judging that these are affordable by the population.

International experience can be useful in formulating a recommendation. However, comparable data on the prepayment ratios related specifically to the benefit package in SHI countries are not available. Data for SHI countries on the share of general government expenditure in total health expenditure is available, and one could use this share as a proxy for the prepayment ratio. The average of these 'prepayment' ratios in 27 countries is 71.1%, with 16 countries having a ratio from 70 % to 91.9%^{liv}. In terms of financial protection against health care costs, the latter range is taken as being a reasonable guidepost for developing countries.

- Prepayment ratio by target group

Analysing the extent of prepayment by target group is important because it indicates to what extent the SHI scheme manages to introduce universal financial protection. Differences in prepayment ratios between target groups can be caused by different levels of insurance membership among these groups, by fragmentation of risk pools resulting in different levels of financial risk protection, and by the existence of alternative prepayment mechanisms (such as community based health insurance schemes) that are used more by certain target groups.

There is a serious concern that employees and other workers that can be registered relatively easily benefit from a higher ratio of prepaid contributions to total health care costs than others. The challenge for SHI schemes is to develop a plan whereby the other target groups become systematically enrolled in the system at similar conditions as those initially enrolled. This will then eventually lead to similar prepayment ratios for all groups, with comparable financial access to health care services.

b) Protection against catastrophic expenditure

- Percentage of households with catastrophic spending

Whilst prepayment is preferable to out-of-pocket payments in terms of improving financial access to health services, this does not guarantee that health care payments are affordable to all. Thus the design issue of protection against catastrophic expenditure is included, with better performing SHI schemes minimizing the percentage of households with catastrophic spending. For instance, if prepaid contributions are too high for a number of households and/or if co-payments for certain health services are too high (especially for poorer households), or simply if certain services are excluded from the SHI benefit package, then health care payments may not be affordable.

The extent of prepayment remains important as a measure of financial accessibility. However, this particular performance indicator of minimizing the percentage of households with catastrophic spending gives a more fundamental measure of how successful a SHI scheme has been in ensuring the affordability of health care payments. Catastrophic spending is defined as being 40% or more of a household's effective income, net of subsistence (food) expenditure^{lv}.

- Catastrophic spending by target group

As with the prepayment criteria, analysis by target group is useful in showing how equitable the SHI scheme is. Catastrophic spending is likely to be a greater problem amongst the more vulnerable target groups, but a well performing SHI scheme would limit such spending even amongst such groups.

FURTHER PERFORMANCE ASPECTS

The performance indicators specified measure the affordability of health care payments, through analysis of the extent of prepayment and catastrophic spending. However, the sources of financing are also important in determining how equitable the financing of the SHI scheme is. In this context, the concept of equity is broader than that of affordability, and refers to the way contributions into SHI are distributed across households with different incomes. Further, and as noted from the outset, it is important that the health care payment mechanisms used generate both sufficient and sustainable revenues for the SHI scheme to function as desired.

The primary source of funding of a SHI system is *contributions*. In the case of employees, they are usually in the form of a wage-related contribution, often paid in part by the employer. In the case of the self-employed, they can be flat-rated or income-rated^{lvi}. Income-rated contributions are preferable to flat-rate contributions on equity grounds, as those with a higher income will accordingly pay higher contributions: contributions are thus based more on ability to pay than in a flat-rate design. Flat contributions, especially in a country where it is very hard to properly assess incomes, can be time saving and easier to administer. We thus observe an efficiency-equity trade-off, with contributions becoming more equitable but at the expense of larger administrative costs in an income-rated design. One intermediate solution is to have a series of flat-rates as an alternative to

either a pure income-rated or flat-rated design. This accounts to some extent for the ability to pay individuals, without making administration too costly and time consuming.

There may also be a limit that society as a whole puts on the degree of equity. When in a SHI scheme all contributions are pooled and the benefit package is universal, differences in contributions between groups may turn out to be so large that they are no longer acceptable to many people. Thus acceptability and/or sustainability of the SHI scheme may be jeopardised, as a significant part of the population may be unwilling to accept this important implicit redistribution. One way for a scheme to recognize a limit on financial solidarity is to determine that the wage, on which contributions are paid, is taken account of up to a ceiling only. In this way one reduces the differences in the levels of contributions of the worker population in the different wage categories.

Contributions (in the form of a wage-based contribution) are a relatively sustainable source of revenue, since they are a fixed amount of workers' income. This makes them less subject to the yearly budgetary negotiations than if funds were coming from general taxation. Note, though, that this doesn't guarantee complete stability in funds. The amount generated will fluctuate according to the state of the economy, with less collected in recessions when workers get laid off.

But financing SHI through contributions alone may not always generate sufficient and stable resources. This is especially likely if policy makers wish to cover more of the population than just those who have contributed via payroll contributions. Indeed, the unemployed, retired, students and the poor also need coverage. Hence in most SHI systems, these contributions are supplemented in a number of ways. The main supplementary source of funds usually comes from *government subsidies through general taxation*. These, as noted earlier, can secure affordability of health care to a greater number of people, and contribute to improved equity in the setting of contributions. Some may criticize such government subsidies as it reduces the independence of the SHI fund from the government budget^{lvii}. In addition, the establishment of government subsidies is not always without friction. In the ROK, for example, the financing of insurance for the different population groups became a political issue in early 1989^{lviii}, when membership became compulsory for the urban self-employed. The question was how politically feasible it was for the government to subsidize the self-employed (the subsidy aimed to limit their direct financing burden). Friction arose, as workers did not like the possible subsidization of the self-employed. They had been taught how important payroll contributions were, giving them the right to SHI-financed health services. Thus, they queried why the self-employed should be spared from such contributions? Eventually, a political compromise was reached, and government subsidies were implemented to a limited extent: in 1995, they amounted to 35% of the urban self-employed health insurance fund^{lix}.

Other important sources of funds are *earmarked taxes* and *external aid*. Specific consumption taxes on harmful products (such as tobacco and alcohol) and activities can help alter consumer behaviour and cover to some extent the health care costs incurred from such products and activities. External aid may be useful in financing specific one-

off tasks, such as support in putting in place organizational changes to the SHI scheme, or temporary co-financing of the coverage of those who are unable to pay. Yet, it is by nature not a long-term solution.

Co-payments can also influence consumer incentives (see discussion on moral hazard above), and thus play an important role in containing costs. In general though, they are not seen as a ‘generator’ of resources for the SHI scheme. Instead, it is typically the health care providers who receive revenues generated from co-payments. They do impact, however, on the level of SHI expenditure, as insured expenditure is lower, *cet.par.*, the higher the level of co-payments.

Thus whilst contributions are the primary source of funding for SHI schemes, for reasons of equity and sufficient resource generation they are usually supplemented by the other sources of funds described above.

Risk pooling

3. LEVEL OF FRAGMENTATION

In universal coverage schemes such as tax-funded and SHI schemes, prepayment is combined with spreading of risk amongst members of a pool^{lx}. This offers greater protection against high cost health expenditures, and thus improved financial accessibility. But although a SHI scheme – by definition – pools risks, the actual extent of risk pooling between schemes in different countries can vary greatly, as complete risk pooling does not always take place. This depends not only on the extent of prepayment (see key issue 2a), but also on the level of fragmentation of risk pooling. Fragmentation is associated with too many small risk pools^{lxi}. Fragmented risk pools may result in certain segments of the population, especially the low-income groups, having less financial protection against health expenditures than others. The risk pools they are associated with will receive a lower overall amount of contributions, leading to a more limited benefit package and restrictions on access. Thus minimizing the level of fragmentation enables a greater financial accessibility of health services for all.

It is important to note that fragmentation is not merely identical to the existence of multiple risk pools, however. If a mechanism is in place, called risk equalisation, whereby the available resources of pools are corrected for the different risks of their members, fragmentation is avoided. In most cases, an umbrella SHI organization establishes such equalisation.

PERFORMANCE INDICATORS

- Multiple risk pools? If yes, are there risk equalisation measures in place?

SHI schemes can either be made up of multiple risk pools / multiple funds, or a single risk pool / single fund. In a single risk pool, all financial operations flow through it, whereas in a multiple fund system, each risk pool has its own financial fund. A single risk

pool may have branch offices in regions or provinces, however. But even then, the single risk pool's management is accountable for all financial flows in the system. This is the case of the National Health Insurance in Taiwan, China: the Bureau of National Health Insurance (NHI) administers the whole scheme and keeps full financial control over the six regional NHI offices. Note that the main responsibilities of these offices relate to processing of enrolment and claims review^{lxii}. Whilst there are important reasons why a multiple fund system may be preferred (discussed in the further performance aspects below), for the key design issue of minimizing the level of fragmentation, single fund systems remain the most attractive. This is because pooling is maximized, with all members' risks combined into one pool and the right to the same benefit package.

We reiterate, though, that a multiple fund or risk pooling system is not synonymous to fragmentation. Indeed, policy makers intent on keeping the objective of one benefit package for all insured, can establish the necessary connection across pools. This is known as risk equalisation, with subsidies given for high-risk individuals, normally through a so-called "solidarity fund". It is needed to help ensure funds accept all categories of members, including the high risk, by providing these funds with the necessary financial resources to 'cover' these high risks. In addition, the incentive to systematically look for low risk members should be reduced; those funds with a disproportionate number of low risk members are likely to develop financial surpluses, but these will need to be shared with the other funds through the risk equalisation mechanism.

To measure the performance of SHI schemes in terms of this key issue, we first ascertain whether there is a single or multiple fund system. For the multiple fund systems, we then determine whether risk equalisation measures are in place. It is important to stress again, though, that whilst fragmentation of risk pooling is not desirable, there are efficiency arguments for why a single fund may not be preferred. Thus the performance indicator checks simply whether risk equalisation measures are in place.

Two forms of risk equalisation are distinguished: risk adjusters and ex-post risk sharing^{lxiii}. *Risk adjusters* are characteristics used to estimate likely health expenditures, with typical adjusters used in existing mature SHI schemes including:

age, gender, disability, income, employment status, region (epidemiological profile and whether it is predominantly rural or urban), prior year expenditures, prior utilization (using diagnostic information).

For those insurance funds with disproportionately high numbers of individuals with any of the above characteristics, and thus an expected greater proportion of high risk individuals, subsidies can be given through the solidarity fund from those funds with (expected) lower risk individuals. This helps equalise the impact of different risk profiles, although imperfectly because such adjusters are only *estimations* of likely health expenditures for different individuals. Certain characteristics are easier to obtain information on than others, such as the age, gender and employment status profile of a fund's catchment area, along with characteristics of the region. A SHI scheme should use

risk adjusters that are not too costly to obtain, whilst still being good predictors of future health expenditures for different individuals. For instance, five different age sub-groups coupled with gender and whether the region is predominantly rural and has a low, medium or high incidence of malaria would result in 36 cells on which subsidies to higher risk funds could be based.

An example of risk equalisation between risk pools can be found in the Colombian universal health insurance^{lxiv}. The insured contribute 12% of their salary (the *Regimen Contributivo*), unless their contributions are waived if their income is insufficient (the *Regimen Subsidiado*). All insured can affiliate themselves with a health insurance fund (*Entidad Promotora de Salud-EPS*) of their choice. The payroll contributions are paid directly to these health insurance funds. Yet, at the same time, Government has determined the level of health insurance revenues to which a fund is entitled. This revenue equals a flat amount per person (*Unidad de Pago por capitación-UPC*) adjusted for age and sex times the affiliates of the fund. The schedule of flat amounts is set in such a way that the total amount of revenue of a particular fund covers the cost of health services used by the members of that fund. The risk equalisation is thus as follows: (i) those health insurance funds that receive an amount of payroll contributions that exceeds the revenue that is due to them, pay the 'excess' amount to a solidarity fund (*Fondo de Solidaridad y Garantía- FOSYGA*); (ii) the FOSYGA then distributes the net amounts it receives to those health insurance funds whose contributions are below the revenue due.

Ex-post risk sharing involves retrospective reimbursement by the solidarity fund for some part of each fund's costs. This can be designed, for instance, to cover the costs of those individuals whose costs are exceptionally high. It is interesting to note that the extreme of complete reimbursement is effectively a single fund system.

FURTHER PERFORMANCE ASPECTS

The financial responsibility in a single or multiple fund system has an important effect on efficiency. Branch offices in a single fund system have no incentive to contain costs when they have no financial responsibility and when all their expenditures are financed through the central fund. In contrast, in a multiple fund system, there may be a positive incentive for each fund to be efficient, when it retains the revenues it receives from its various contributors minus the contributions to a solidarity fund. However, ex-post risk sharing reduces this incentive, as some of the fund's costs are reimbursed by the solidarity fund.

In a single fund system, efficiency can be enhanced by giving financial incentives to branch offices in order to administer the work as efficiently as possible and/or to engage in contracts with efficient providers. And in multiple fund systems, efficiency arguments are important in explaining why risk adjusters can be preferred to pure ex-post reimbursement, even though as noted earlier they are likely to be imperfect adjusters for differences in risk profiles.

But in a multiple fund system or a single fund system with some financial delegation, it is important that there is regulation to combat any selection behaviour against higher risk

individuals (cream-skimming). Such selection behaviour is undesirable as it results in increased fragmentation through exclusion of higher risk individuals. The umbrella SHI organization can introduce the principle of open enrolment, whereby the insurance fund must accept all insurance applicants in its geographical working area^{lxv}, along with strict regulation of premium contributions and co-payment setting, are important tools for limiting potential selection behaviour.

A more pragmatic reason for choosing either a single or multiple fund system is on the basis of existing health insurance-related institutional infrastructure. Indeed, we observe for example that in Belgium, a multiple fund SHI system evolved out of existing mutual health funds with strong social and political roots in society. In the Republic of Korea as well, the multiple funds system was used until recently; by 1997, 373 health insurance funds were still operating. In 1998, the law of National Health Insurance Corporation aimed at establishing a single fund within a period of five years.

Supplementary insurance also needs to be considered. These cover extra services that are not covered in the SHI benefit package, and can be non-essential services, such as private rooms in hospitals; but can also be certain drugs or treatments deemed as being less important or simply not affordable, reduced waiting time and some of the cost of co-payments. There is the risk that if these are offered by SHI funds, it is another way in which they can effectively select against high risk individuals – by designing such supplementary insurance to meet the preferences of the lower risks. From that point of view, it may be preferable to leave such supplementary insurance to separate private health insurance firms. The latter is the case in Germany.

A final point is that there may be limits to risk equalisation between different population groups, at least on a temporary basis. This is the case for example in countries where only the formal sector population would be able to sustain the financing of a fairly comprehensive health services benefit package, in contrast to the non-formal sector population. Bringing all of the population to the same level immediately would generally require a combination of important transfers from the formal sector to the informal sector population as well as special government subsidies. It thus could be very difficult for financial reasons, at least in the short run, to guarantee a unique benefit package to all. In such circumstances, it may be rational over the short run to accept a multiple fund system, yet keeping the long-term objective of one benefit package for all. In view of the latter objective, the multiple funds need to be connected from the start, so as to institutionalise risk equalisation mechanisms. In the Colombian system referred to above, the insurance for those who are not able to pay contributions (those that belong to the Regimen Subsidiado) is financed in part by a special transfer from those in the Regimen Contributivo that pay the payroll contributions. 1% of the payroll contributions are transferred into the FOSYGA that then ensures the financing of the membership of the vulnerable population groups.

4. COMPOSITION OF RISK POOL/S

As noted in the discussion concerning the last key issue, risk pooling provides better financial accessibility for all than when there is no risk pooling. As well as seeking to minimize fragmentation of risk pools, it is essential that the composition of the risk pool/s is representative of the target population in order to achieve this target. This is both to ensure that certain groups are not excluded and, more fundamentally, that the risk pool is sustainable.

PERFORMANCE INDICATORS

- Is membership compulsory?

One of the fundamental principles of SHI is that contributions are not risk-based but are instead based on ability-to-pay. It reflects a desire for equal access to health care and for a certain degree of equity in contribution setting. However, an important implication of this is that the problem of *adverse selection* – where bad (high) risks chase good (low) risks out of the insurance market – is likely to occur if membership is voluntary. It is also worth noting that even in risk-based insurance, as with pure private health insurance, adverse selection problems are likely when insurance funds cannot distinguish between low and high-risk individuals.

Adverse selection occurs in voluntary SHI as risks are pooled (either one of multiple pools or a single pool) and the same benefit package is offered to all those in the pool. Crucially, this implies subsidization from low-risk to high-risk individuals *and* from individuals contributing more to individuals contributing less, with richer individuals contributing more if contributions are based on income.

Thus if membership is voluntary, many low-risk individuals and richer individuals are not likely to want to join the scheme because of this redistribution – they may judge that they receive less than what they put in^{lxvi}. In the Bwamanda community health insurance scheme in the D.R.Congo for example, the richest population group was under-represented among the scheme's membership^{lxvii}. Note, though, that very poor low-risk individuals may be interested in joining provided their contributions are perceived as very affordable. Even very ill (high-risk) rich individuals might have an incentive to join the scheme.

This leaves a risk pool composed of mainly the higher risks. Further, new members may only be enrolling when they fall ill. Without modification of the benefit package offered, the most likely outcome is financial strain on the SHI fund: high-risk individuals are more likely to make demands from the benefit package, with contributions insufficiently adjusted to this high risk profile. The immediate result of this is: either the package offered would have to be moderated, or the contributions paid will have to rise, both of which may result in yet a further number of members wishing to leave the scheme.

Thus, voluntary membership with risk pooling based on SHI principles may not be sustainable. Compulsory membership avoids this potential exodus from the scheme and

should thus be preferred *if* policy-makers want to maintain the universality principle of SHI, with contributions that are ‘averaged’ and that reflect the totality of a community’s or society’s health risks.

Alternatively, there is the risk-based private insurance system where insurers can charge different premiums to attract different risks. Private health insurance companies are likely to be confronted with adverse selection problems as well, however. Adverse selection can lead to healthier people withdrawing from insurance, as their premium becomes ‘too high’, and can be so important as to make the selling of commercial health insurance unprofitable. Further, ‘cream skinning’ is likely to occur, with insurers designing contracts to attract low risks (but with incomplete coverage), and leaving high risks with insufficient access to insurance^{lxviii}. In such situations, the objective of equal access to health care will be hard if not impossible to achieve.

FURTHER PERFORMANCE ASPECTS

The *unit* of subscription or registration for SHI is generally either at the individual or household level. Registration at the household level is advantageous in that it increases coverage and reduces adverse selection. An important concern, though, is potential fraud in the form of individuals not having contributed but still claiming to be members of a registered family when they are not. To avoid this, a household and the dependants that belong to it need to be clearly defined. Alternatively, one may want to register each individual within the family and deliver a health insurance card to each of them. It should also be noted that the various options for subscription might imply different levels of administrative costs, with individual registration likely to entail the highest cost. Still, the latter may be a worthwhile ‘investment’ if fraudulent use of the SHI system can be reduced in an important way.

In many developing countries, there is significant mobility of workers and self-employed. Such migrants should not be excluded from the scheme. The question is where they will be registered, and where they will pay their contributions. Workers and self-employed that move from their hometown to another town could in principle register at either location. It should be ascertained, however, that even when they register in the place of work, their dependants are also covered. This is especially important in the case of the self-employed families that need to contribute a flat sum per member of the household. This particular concern is eased in the case of workers whose contributions (and that of their employers) cover the whole household.

Purchasing

5. BENEFIT PACKAGE

The pooled contributions of a SHI system are used to purchase a set of health interventions, with all insured members entitled to a specified benefit package (that is

also stipulated in a contract between the SHI and the providers at all levels of the health care system). This benefit package should be as comprehensive as possible, given the budget constraints of the SHI scheme. Furthermore, its specification should account for society's preferences regarding efficiency and equity, so that resources are used in the best possible way. More fundamentally, it is important that patients effectively receive the health interventions from the benefit package that they need. In other words there should be no under-provision of health care. But neither should there be over-provision, as this is not in the interest of the patient and the SHI. Monitoring of under- and over-provision is therefore an important task of the SHI administration.

PERFORMANCE INDICATORS

- Are monitoring mechanisms – patient appeals mechanism, full information on claimant rights, peer review committee and claims review – in place?

Monitoring mechanisms should be in place to ensure that the benefit package is fully received by all the insured who are entitled to it. Without information readily available on claimant rights, members may unknowingly not be accessing the full range of services they are entitled to. This should be coupled with some kind of appeals mechanism, so that the patient can complain when he/she feels that he has received inadequate care.

However, information on claimant rights and an appeals mechanism do not equate to the patient knowing what treatment she/he should receive when she falls into ill health. Indeed, even fully knowing her claimant rights and having access to an appeals mechanism, she relies on the health care provider to assess what kind of treatment she should receive, as she recognizes the health care provider is better informed to make such an assessment: there is an *asymmetry of information*. This is known as the “agency” relationship, where the health care provider (the “agent”) makes decisions on behalf of the patient (the “principal”)^{lxix}.

The agency relationship can lead to the provider not providing interventions included in a benefit package to a patient even when they are necessary^{lxx}. This is more likely, for instance, if the provider has a strict budget and the intervention required is costly. A peer review committee can review whether providers have given adequate care, often through analysis of cases brought up through some kind of appeals mechanism.

Over-production is also possible, especially when the provider is paid by the insurance fund on a fee-for-service basis. This sixth criterion addresses in detail how alternative provider payment mechanisms can affect the performance of SHI schemes, particularly in relation to potential over and under production. Note that this is also because of asymmetric information, this time between the insurance fund (also a principal) and the health care provider (again the agent). The existence of a claims review, whereby insurance claims are independently reviewed by appropriate health personnel within the insurance fund, helps ensure that claims made by health care providers are justifiable.

Together, these monitoring mechanisms – a patient appeals mechanism, full information on claimant rights, a peer review committee and a claims review – are indicative of a well implemented benefit package, and thus of good performance.

FURTHER PERFORMANCE ASPECTS

Whilst these monitoring mechanisms are important, the nature of the contract between the provider and insurance fund also needs to be carefully designed. It is not, though, simply what exactly is stipulated in the contract, especially as the ultimate decision whether an individual should receive a particular treatment rests with the provider, but also the potential *contestability* of the contract that matters. Needing to renew contracts would put pressure on the providers to provide good quality care^{lxxi}.

In deciding on the actual contents of the benefit package, it should be as comprehensive as possible, given the budget constraints of the SHI scheme. Furthermore, the policy maker needs to decide what is the relative importance of different efficiency and equity criteria. It is of benefit to all stakeholders in the SHI system when there is maximum clarity about the criteria used. In a recent health financing technical paper, the following efficiency and equity criteria were considered^{lxxii}: (1) Cost-effectiveness; (2) Significant positive impact on an individual's health / severe health conditions; (3) Equality in health over a lifetime; (4) Poverty reduction; (5) Horizontal equity as “equal treatment for equal need”; (6) Collective versus individual responsibility. The recently published Commission on Macroeconomics and Health used the criteria of cost-effectiveness and poverty reduction for those interventions that deal with major threats to health at the population level. These were used to propose an essential set of interventions (including outpatient care) geared to low-income countries. This set corresponds to an *average* of \$30-\$35 per person per year in 2007, and \$35-\$45 per year in 2015.

It is especially important that efficiency-equity trade-offs are recognized and well understood. For instance, if an intervention targets a severe health condition, but is not very cost effective, whether the policy maker decides to include this intervention will depend on the weight he attaches to these criteria. Another example is where highly costly treatments may well be part of the benefit package, invoking that insurance against the costs of such treatments benefits the vulnerable population and thus contributes to poverty reduction.

The relative weighting given to each criterion should reflect the society's particular preferences. In other words, one may prefer less efficiency in exchange for a greater degree of equity. The policy maker can also reflect society's preferences by setting varying co-payment rates according to the level of priority given to the intervention^{lxxiii}, as well as by excluding certain interventions.

6. PROVIDER PAYMENT MECHANISMS^{lxxiv}

How health care providers (these can be both individuals and institutions) are paid can significantly affect both the cost and quality of care, and in these ways is instrumental in the target of optimal resource use.

PERFORMANCE INDICATORS

It is impossible to categorically state which provider payment mechanisms are better or worse than others, as each have their relative strengths as well as weaknesses, and so we do not specify performance indicators. Instead, we discuss what are good ways in ensuring that each kind of provider payment gives the best impact on cost containment and quality of care. These are discussed below.

FURTHER PERFORMANCE ASPECTS

For each payment method, we give a brief description followed by design remedies to ensure better performance in terms of cost containment and quality of care. For a fuller discussion, including empirical results on the effects of different provider payment mechanisms, the reader is referred elsewhere^{lxxv}.

Fee-for-service

Description:

- Fee-for-service for both ambulatory and inpatient care is a payment mechanism whereby providers are paid for each service or act provided to a patient. Its perceived strength is in terms of quality: by encouraging providers to provide health services. However, this incentive effect is also its main source of criticism: fee-for-service is often criticized for encouraging an overproduction of health services (supplier-induced demand), as providers are paid for each service given^{lxxvi}. For the same reason, there is a tendency to reduce the time spent by activity and/or delegate to less qualified personnel, so the provider can maximize their income. Further, administrative costs are likely to be high, because of billing costs, reimbursing fees and monitoring/adjusting fee schedules.

Design remedies:

- Overproduction can be counteracted by combining fee-for-service with budgets, and/or by adjusting fees after a specified quantity of services is exceeded^{lxxvii}. Some co-payments for patients (see criteria 2) can also act as a counterweight to provider demand inducement. Competition amongst providers can moderate the negative quality aspects described above, as bad quality service will lead to patients choosing other providers, although this is limited by patients' ability to ascertain what is good or bad quality service^{lxxviii}. Monitoring, such as in the form of peer reviews, can also help limit inappropriate delegation and insufficient time spent per activity.

Daily (per diem) payment

Description:

- Daily payment of hospital services is simple and cheap to administer. However, unregulated it, like fee-for-service, has a weak capacity for cost-containment, although for a different reason: there is an incentive to expand the length of stay of patients, and/or to increase the number of admissions. The effect on quality can be negative in the absence of competition or monitoring, as hospitals have an incentive to reduce the inputs used to limit costs.

Design remedies:

- In order to provide incentives to shorten the average length-of-stay, the daily payment can be progressively reduced as the length of stay increases^{lxxix}. Competition amongst providers and monitoring are again the main methods for ensuring good quality services.

Case payment

Description:

- Case payment can be used for both ambulatory and inpatient care, and is easy to administer. An important example is the Diagnosis Related Group (DRG) payment method, where hospitals are paid an inclusive flat sum for a patient's treatment according to her diagnostic group. This is good for cost containment as it benefits more efficient providers, but the effect is offset by case payment still encouraging increased admissions. Further, there is an incentive for providers to diagnose more severe – and thus lucrative – cases, and/or to transfer the more complicated cases towards other providers, both limiting the potential of case payment to contain costs.

Design remedies:

- Diagnostic groups need to be clearly defined. Monitoring is especially important here, to ensure patients are diagnosed correctly and that complicated cases aren't needlessly transferred, although such monitoring can be costly.

Capitation payment

Description:

- Capitation payment is where providers receive payment according to the size of the population served, and can be used for both ambulatory and inpatient care. It is easy to administer, although slightly less so when the payment is adjusted to reflect the expected morbidity of the population (measured by, for instance, the age and socioeconomic structures). Crucially, because providers are *not* paid according to the quantity and mix of health services given to the individual, as is the case with the previous three payment methods, there is no incentive to provide excessive health services. But this improved cost containment gives rise to the opposite problem of potential underproduction. Further, transfer of cases to higher levels of care limits this method's ability to contain total health care costs.

Design remedies:

- Monitoring is again important, especially in relation to underproduction, such as by monitoring utilization and occupancy rates. For transfers, monitoring is less essential if capitation payments are paid not to just one level but to an integrated referral system, although this may be difficult to put in place if it involves combining payment of multiple institutions. To help avoid underproduction, one important method is to capitate *groups* of individual providers together, reducing the incentive of any single provider to under produce. Competition amongst providers may also help alleviate this problem, as providers' income is dependent on the number and type of people served.

Budgets

Description:

- Budgets can be set for providers, which if strictly fixed, help contain costs. As with capitation, this is because there is no link between the quantity and mix of health services given to the individual and the amount received by providers. Their ability to contain overall costs, though, is limited if the budget is insufficient and results in others having to provide the necessary care. Further, when budgets are not entirely strict, and as they are often based on historical costs, there is no incentive for providers to minimize costs, and even an incentive to exceed the budget ceiling. Transfer of cases is also likely, along with underproduction and waiting lists.

Design remedies:

- Budgets need to be seen as being strict and not based on historical allocations, but instead on the population's size and expected morbidity. Monitoring is again necessary to avoid underproduction and inappropriate transfer of cases. As with capitation, a single budget for an integrated referral system is possible but may be difficult for the same institutional reasons.

Salaries

Description:

- Salaries are an administratively simple remuneration method, but can only of course cover the costs of personnel (and not other provider costs, such as drugs and medical equipment). As with both budgets and capitation, overproduction is unlikely but underproduction is, because salaries are likely to result in low motivation of personnel. This can even lead to providers taking up work in the private sector.

Design remedies:

- Ensuring salaries have performance-related aspects, is an important way of ensuring better quality, along with the monitoring aspects described under capitation and budgets.

Thus a well-performing SHI scheme must ensure that providers face appropriate incentives to ensure that resources are used optimally. As this discussion has shown, each method has strengths and weaknesses. This is perhaps most clearly seen in terms of whether overproduction or underproduction is more likely. The following table summarizes this, along with important design remedies:

Table 3: Summary of provider payment methods and expected level of production

Payment Method	Overproduction or Underproduction?	Main design remedy (alongside monitoring activities)
Fee-for-service	Overproduction	Combine with budgets Adjust fees when specified level exceeded
Daily payment	Overproduction	Reduce daily payment as length of stay increases
Case payment (DRGs)	Overproduction	Ensure diagnostic groups are clearly defined
Capitation	Underproduction	Integrated referral systems
Budgets	Underproduction	Strict budgets that are <i>not</i> based on historical allocations Integrated referral systems
Salaries	Underproduction	Ensure salaries are performance-related

Because of these strengths and weakness, a mix of payment methods is likely to be preferred. For instance, one could adjust a basic salary with capitation weighting, and combine this with fee-for-service remuneration for certain interventions where high production is unequivocally desirable (such as immunisations).

7. ADMINISTRATIVE EFFICIENCY

Administrative costs are the result of planning, management, regulation, and collection of funds and the handling of claims of the delivery system^{lxxx}. Provisions for certain investments may also be part of the overall administrative costs. Further, a certain amount of funds should be kept as reserves, to protect from unexpected costs as well as fluctuations in expenditure. These financial allocations should not be excessively high, so that as much money as possible goes on health care to the greatest number of people. However, to equate better performance with lower administrative costs is too simplistic, as certain aspects, such as information on claimant rights, claims reviews, an appeals mechanism and peer review committee described in criteria 5a are important for ensuring optimal resource use, but will increase administration costs.

PERFORMANCE INDICATORS

- Percentage of expenditure on administrative costs

Here, we use the same approach adopted in measuring the “extent of prepayment” indicator, and suggest a maximum percentage based on mature SHI systems’ experiences. The mean share of administrative costs in health spending was 4.2% for a selection of mature SHI systems^{lxxxii}, with a range from 2% (Japan) – 6.6% (Switzerland). Note, though, that some of these costs may have been somewhat underestimated^{lxxxii}. However, these systems demonstrated a negative trend over time, with decreasing average costs in processing of claims (economies of scale) as well as technological advances being important factors. For example, in the Republic of Korea, administrative costs in health

spending were 11.9% in 1990, but by 1999 had fallen to 6.4%. Indeed, in a preliminary analysis of 20 OECD countries over this period, the share of administrative costs is reduced on average by 0.1% per year.

Thus a maximum percentage of 6-7% is only recommended *once* a country is already at the later stages of SHI development. Before then, performance can be monitored over time, with administrative costs expected to fall as SHI is extended. A minimum of 0.1% reduction per year (based on the experience in selected OECD countries) could be the aim.

FURTHER PERFORMANCE ASPECTS

Budget caps on administrative resources are a simple way to help control administrative costs. For instance, in Belgium, a typical budget consists of a fixed part, which is granted unconditionally, and a variable component that depends on the performance of the fund.

Further, excluding certain low cost, high frequency interventions from the benefit package may help reduce administrative costs, by avoiding the transaction costs of reimbursement. If such interventions satisfy efficiency and equity criteria, they should only be excluded if they are easily affordable, and so can be paid for out of pocket even by poorer households.

4.3 The government's role in preparing the development of social health insurance: a final note

This third section of the paper has discussed important factors that can facilitate the transition to universal coverage, learnt from the experience in SHI development in selected countries. Stewardship was shown to be an essential facilitating factor in these countries, and certain critical stewardship functions are stressed here in preparing for SHI implementation.

The first such stewardship function is to define a clear and coherent SHI strategy, which would need to address the principal design features of the scheme. These are: (1) the timeline for the systematic coverage of the population and/or specific population groups, (2) the definition of the contributors and beneficiaries, (3) the financing sources for the SHI contributions, (4) the allocation of these revenues and provider payment methods, and (5) the organizational and administrative framework.

The strategy then needs to be accompanied by a draft SHI law. The latter contains the broad principles of universal coverage via SHI, the basic design features and regulations providing detail about these design features. A timetable for establishing SHI development should be clarified, specifying when the SHI law will be passed, and the start of its implementation.

The implementation itself will require continued government stewardship. There will be tasks in actually launching the scheme and ensuring, among others, that administrative

capacity is effectively in place, that the health services in the benefit package can be provided and that the development of the scheme can be monitored and evaluated. This fourth section has given a parsimonious set of performance indicators that were proposed to facilitate this monitoring and evaluation.

Section 5: CONCLUSIONS

The preceding note on the government's role in implementing SHI highlights the government's stewardship role in launching and guiding the transition to a universal coverage SHI scheme. A number of factors were judged crucial in facilitating this transition: the level of income, the structure of the economy, the distribution of the population, the country's ability to administer SHI, and the level of solidarity within a society. It is also essential that policy makers take these factors into account and try to use them as policy levers. Improving the administrative capacity and fostering a sufficient level of solidarity belong to those factors that can be impacted upon more directly via Government's stewardship.

Thus it is clear that SHI development in a particular country to a large extent depends on that country's specific socioeconomic and political context. All the more important therefore that the SHI policies that are designed and enacted be well prepared and realistic. In particular, appropriate policies in seven key design issues – population coverage, the method of finance, the level of fragmentation, the composition of risk pools, the benefit package, provider payment mechanisms and administrative efficiency – are instrumental in ensuring that the objective of universal coverage is finally realized. Monitoring of performance indicators in these key design issues is one of the tools offered in this paper. Achieving universal coverage may take time, however. In this transition period, the set of performance indicators should also be useful in identifying areas for adjustment and improvement.

Universal coverage, that is secure access to basic health care for all at an affordable price, is the ultimate objective of SHI. This paper has demonstrated what can be done to help come closer to achieving this aim, by analysing the transition process and detailing what characterises a well-performing SHI scheme. Such a SHI scheme can then contribute to not only a greater fairness in financing and improved responsiveness, but also the final goal of better health for all of the population.

ANNEX

Table 1 Prepayment ratios in SHI systems, 2000

Prepayment ratio (%)	Country		
40-49.9	Chile (42.6%)	Republic of Korea (44.1%)	Monaco (48.1%)
50-59.9	Yugoslavia (51%)	Greece (55.5%)	Switzerland (55.6%)
60-69.9	Costa Rica (68.4%)	Romania (63.8%) Austria (69.7%)	Netherlands (67.5%) Poland (69.7%)
70-79.9	Belgium (71.2%) Hungary (75.7%) Estonia (76.7%) Slovenia (78.9%)	Lithuania (72.4%) Israel (75.9%) Japan (76.7%)	Germany (75.1%) France (76%) Bulgaria (77.6%)
80-89.9	The F.Y of Macedonia (84.5%) San Marino (85.7%)	Croatia (84.6%) Slovakia (89.6%)	
90+	Czech Republic (91.4%)	Luxembourg (91.9%)	

Source: WHO (2002, Annex Table 5).

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- ¹ Based on Carrin et al. (2001).
- ² See Sekhri and Savedoff (2003).
- ³ A further discussion of these issues can be found in an earlier publication by the WHO and the ILO: Normand and Weber (1994, chapters 2 & 3).
- ⁴ Most of the information is based on the country profiles collected by the European Observatory of Health systems (2002). Additional sources are Cutler (2002), Miranda (1994), Moon (1998) and Bärnighausen and Sauerborn (2002).
- ⁵ Bärnighausen & Sauerborn (2002,p.1562).
- ⁶ We refer to persons employed by lawyers, notaries, huissiers, industrial cooperatives and insurance funds.
- ⁷ For an overview of the years in which laws were voted to systematically cover the various professional groups and dependents, see Bärnighausen and Sauerborn (2002, Table 1, pp.1566-67).
- ⁸ European Observatory on Health Care Systems (2000,p.39).
- ⁹ Apart from the privately insured (9% of the population), 2% of the population is covered via free government care (including police officers and soliders) whereas 0.1% are uninsured.
- ¹⁰ Information from www.israel-mfa.gov.il/mfa/
- ¹¹ The information on Costa Rica is taken from Miranda (1994,ch.8).
- ¹² Caja Costarricense de Seguro Social (CCSS).
- ¹³ Called 'Jyorei' in Japanese.
- ¹⁴ Ogawa et al. (2003).
- ¹⁵ Ministry of Health and Welfare (2003a).
- ¹⁶ This section is based on Carrin and James (2003).
- ¹⁷ Ensor (1999,p.875).
- ¹⁸ Ensor (1999,p.875).
- ¹⁹ Miranda (1994,p.119).
- ²⁰ Moon (1998,p.228).
- ²¹ National Bureau of Statistics (1980).
- ²² Bärnighausen & Sauerborn (2002,p.1560).
- ²³ Moon (1998,p.228).
- ²⁴ Bärnighausen & Sauerborn (2002,p.1563).
- ²⁵ Hofmarcher & Rack (2001,p.7).
- ²⁶ Ministry of Health and Welfare (2003a).
- ²⁷ Bärnighausen & Sauerborn (2002,p. 1577).
- ²⁸ Hofmarcher & Rack (2001,p.16-17).
- ²⁹ Ministry of Health and Welfare (2003b).
- ³⁰ Ikegami & Campbell (1998,p.213-214).
- ³¹ Ikegami & Campbell (1998,p.24).
- ³² Chernichovsky (1991,p.1).
- ³³ Chernichovsky (1991,p.24)
- ³⁴ Chinitz (1995,p.921).
- ³⁵ Normand and Weber (1994).
- ³⁶ Ron (1993).
- ³⁷ See also Ron (2003) where she discusses design issues for social health insurance in a Sub-saharan African context.
- ³⁸ World Health Report (WHR) 2000, pg.95.
- ³⁹ These goals of fair financing and responsiveness are common to all societal systems, but are seen as being particularly important to a health system. Fair financing is an important goal because health care can be catastrophically costly, with the need for care often unpredictable. And responsiveness to people's expectations is important because illness, and medical care as well, has a particularly marked effect on people's dignity and autonomy (WHR 2000, pages 23-25).

⁴⁰ Including responsiveness and fairness in financial contribution as final health system goals has faced some criticism. See, for instance, Richardson et al (2003). However, in this paper, we take these goals as given.

⁴¹ The WHR 2000 notes seven distinct aspects of responsiveness: respect for the dignity of the person, their desire of confidentiality, and autonomy to participate in choices about their own health; and client orientation in terms of prompt attention, amenities of adequate quality, access to social support networks, and choice of provider (WHR 2000, page 32).

⁴² Indeed, this was one of the major aspects of the WHR 2000.

⁴³ WHR 2000, chapter 2.

⁴⁴ WHR 2000, p.95.

⁴⁵ WHR 2000, p.96.

⁴⁶ WHR 2000, p.97.

^{xlvii} Soonman Kwon (2003).

^{xlviii} Gonzalez Rossetti (2002,p.8).

^{xlix} WHR 2000. P.97.

¹ See Normand and Weber (1994), pg. 47 for details of different kinds of health care benefits.

^{li} Further, this moral hazard effect could be accentuated by providers encouraging excess use in certain situations (see design issue 6).

^{lii} In the literature, these different types of moral hazard are labelled as *ex ante* and *ex post* moral hazard respectively. The empirical evidence supports this view that *ex post* moral hazard is likely to be more significant. See Zweiffel and Manning (2000), pgs. 409-459 for further details.

^{liii} Mossialos and Le Grand (1999, chapter 1).

^{liv} See Table 1 in the Annex.

^{lv} Where subsistence spending is calculated as the food expenditure of households whose food share of total household expenditure is at the median of all households. This is the standard currently used by the WHO. See Ke Xu et al. (2003).

^{lvi} Income-rated designs should strictly incorporate all aspects of income. More commonly, though, only wage-rated income is included.

^{lvii} Normand and Weber (1994), pg.87.

^{lviii} Abel Smith (1992 ,p.219)

^{lix} Moon (1998,p.232).

^{lx} Medical Savings Accounts are the exception, involving prepayment but without are inter-personal risk pooling. For a discussion of their potential use as a health financing instrument, see Hanvoravongchai (2002).

^{lxi} WHO (2000, p.101).

^{lxii} Chiang (1997).

^{lxiii} These are both discussed in detail in W.P.M.M van de Ven et al (2002). The listed risk adjusters are found in one or more of five European countries (Belgium, Germany, Israel, the Netherlands and Switzerland).

^{lxiv} See Londoño (2000) and Savedoff (2000).

^{lxv} W.P.M.M van de Ven et al (2002), pg.5.

^{lxvi} Depending on the extent of their risk aversion.

^{lxvii} Moens and Carrin (1992,p.168).

^{lxviii} See Zweiffel (1999) for further details, especially chapters 5, 6 and 12.3.

^{lxix} See, for instance, McGuire et al (1988) for a further explanation.

^{lxx} The converse is true, and is an important concern in discussions on cost containment. See, for example, Carrin and Hanvoravongchai (2003).

^{lxxi} See, for instance, Perrot (2003), for a discussion of different contractual arrangements.

^{lxxii} For an in-depth discussion of these criteria, see HFTB...

^{lxxiii} This was the case, for instance, in Bosnia and Herzegovina, where priorities to different population groups or types of interventions were reflected in variations in the co-payment rates of 10-95%. See Hrabac, Ljubic and Bagaric (2000).

^{lxxiv} This and the following criteria both draw heavily on Carrin and Hanvoravongchai (2003).

^{lxxv} As well as Carrin (2000), see Normand and Weber (1994), chapter 8 and Witter et al (2000), chapter 12.

^{lxxvi} The evidence generally supports this view. See Carrin (2002) for further details.

^{lxxvii} Such methods have been used in, for instance, Japan, Germany, Belgium and Canada. See Carrin (2002) for further details.

^{lxxviii} Because patients generally have less medical knowledge than providers, they may instead simply use easily observable non-medical characteristics, such as the quality of the waiting area. Witter et al (2000), pg 220.

^{lxxix} This is the case in Japan, where basic hospitalization fees have been progressively reduced, with the per diem rate after ninety days being less than half of the first fourteen days. See Ikegami and Campbell (1999), pg.62.

^{lxxx} OECD (2001).

^{lxxxi} Carrin and Hanvoravongchai (2003), pg. 8. Figures are from 1999.

^{lxxxii} For instance, in France, only centralized costs are included in administrative costs, with no account of social security institutions. Carrin and Hanvoravongchai (2002), pg. 33.