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Financing Social Health Insurance: A Social Insurance Assessment Tool for Policy Decisions

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November 2000

This publication was produced as part of the LAC Health Sector Reform Initiative by the Family Planning Management Development Project (FPMD), a project of Management Sciences for Health (MSH) in Boston Massachusetts.

Funding for this publication was provided by the U.S. Agency for International Development under cooperative agreement number: CCP-A-00-95-00000-02.

I. NOTE FROM THE AUTHORS

The Social Insurance Assessment Tool (SIAT) is composed of three parts. First, the **framework** helps users to think through the financing issues of social insurance in the context of health reform. Following the framework, the **assessment questionnaire** raises key questions for which answers are needed in order to make informed decisions about social insurance. Finally, a spreadsheet-based **model** [1] helps with "reality testing," given the current situation of a country. Where are we now, where do we want to be, and what needs to happen in order to arrive there?

The tool covers many areas, one of which deals with the financial implications of various options. While the decisions about social health insurance do not reduce to an "accounting exercise" in terms of how much different services cost, it is useful to have some financial estimates to make better decisions about how to allocate scarce resources. If the estimates need to be refined, the model can be used to carry out sensitivity analysis. For example, if we change the poverty figures to numbers that we believe are more accurate, what does that mean in terms of who is considered poor, and what the estimated cost of providing services will be? If we have under- or over-estimated the cost of providing a particular service, how does the total picture change if we adjust the cost figures to reflect our new assumptions or beliefs about those costs? Can we determine a probable range of costs that seem likely, given current efficiency levels and utilization patterns? Financing is just one aspect of the social health insurance issue, but it is a crucial one; without adequate funding, an insurance program cannot survive. Even though health encompasses much more than revenue or cost, these issues must be part of the discussion if the goal is a feasible and sustainable solution.

Please feel free to contact the authors for questions, comments, or further discussions.

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[1] The complete Social Insurance Assessment Tool, including the Excel spreadsheet Model is available in English and Spanish from **The Manager's Toolkit** on MSH's **Electronic Resource Center** (http://www.erc.msh.org/toolkit) or from the LAC Initiative's website (http://americas.health-sector-reform.org).

II. FINANCING SOCIAL HEALTH INSURANCE: A FRAMEWORK FOR POLICY DECISIONS

INTRODUCTION

Comprehensive social health insurance can be a potent strategy to improve the performance of a health system. If designed well, social insurance can be a powerful engine to achieve the goals of most health system reforms:

Access can be improved by removing financial barriers and by giving providers incentives to serve the entire population.

Equity can be improved if higher-income people contribute more than lower-income people and relatively healthy people subsidize those who consume more system resources and are relatively sick (risk pooling).

Efficiency can be improved if incentives are incorporated into the system to encourage appropriate utilization of resources.

Quality can be improved if the system is structured to reward providers who provide high-quality services and penalize those who don't.

Universal coverage can be obtained if the entire population is incorporated into the system and the package of services that will be covered is based on realistic information about available resources.

This document provides a framework for understanding the financing implications of social health insurance. This framework is designed as a guide to help national decision-makers assess their current system and consider options for change. Some of the broad questions that will be asked include:

- Where will money come from to fund social health insurance and will it be "enough"?
- Is there a priority population, and if so, what benefits package will they have access to?
- What portion of the population will be subsidized and what are their characteristics?
- How will revenue be collected and how will it be distributed?
- What entities will assume the financial risk of providing the defined package of benefits?
- How will providers be paid and what are the incentives associated with different payment forms?

The introduction of social health insurance can bring fundamental changes to health systems. These changes have financial implications as people who deliver services face changed incentives that alter their behavior and impact system costs. New institutions may be created and existing institutions transformed, imposing considerable costs during the period of implementation and continuing costs to maintain the new and transformed institutions. Clients

also change their care-seeking behavior, especially if social health insurance and associated reforms succeed at improving access and quality, causing an impact on health care expenditures. Social health insurance is a principal strategy to promote comprehensive reform of the health sector.

There is a growing consensus among diverse groups in many countries that comprehensive reform of the health sector is needed. Close examination of major reform proposals from a number of countries in Latin America indicates striking similarities in their stated goals of health reform and their assessment of the current problems in the health sector. Proposals include goals that imply comprehensive social health insurance, such as universal coverage, solidarity, improved access, and protection against financial risk.

Proposals for reform can be thought of as having the following key characteristics:

- A statement of goals that imply a set of principles and values
- An assessment of current problems
- A range of proposed solutions aimed at solving current problems and achieving goals

For a reform to be successful, all elements must work together. Goals and values must be defined, proposed solutions must be feasible and must work together to form a coherent model, and the reform model must produce the desired results.

This document presents an analytical framework for thinking through the financing issues of social insurance in the context of health reform.

Social health insurance is a central focus of current reform discussions.

Social health insurance is a central focus of the reforms currently being discussed in many countries in Latin America. The consensus appears to be that the poor should be subsidized and that people should be protected from the large financial risk posed by high-cost illnesses. Public systems go part of the way toward protecting people from large financial risk, but do so with inequities, inefficiency, and inadequate quality. Social security institutions cover the formal sector employed population. Other people purchase private insurance or pay for care out of pocket because of dissatisfaction with the public and social security systems. One goal of health reforms in the region is to provide access to adequate quality services without imposing high financial risk on the population.

What are the features of an "ideal" social insurance system?

A social insurance system is considered "ideal" if it has the following four characteristics:

i. *A defined benefits package that is also available.* An "ideal" social insurance system explicitly specifies a list of benefits that will be provided to the covered population. In addition to specifying what is covered, it is important to add the criterion that these benefits are actually available.

ii. *Financing that includes cross-subsidization from higher-income to lower-income people.* All forms of financing are included in this definition including general tax revenues as well as wage contributions. (This criterion also implies the social objective of universal coverage in that a social insurance system that only covers a portion of the population does not completely satisfy the criterion of cross-subsidization.)
iii. *Risk pooling that pools together the relatively healthy with the relatively sick.* Another important aspect of social insurance is that the relatively healthy must be pooled together with the relatively sick. This implies that the relatively healthy also subsidize the relatively sick. (This criterion also implies the social objective of universal coverage in that a social insurance system that only covers a portion of the population does not completely pool the health risks of the population.)
iv. *A defined covered population:* An "ideal" social insurance system knows the people they must provide benefits to and their characteristics (age, gender).

Social Insurance ≠ Social Security Institutions or Public Health Systems.

Please note that the concept of social insurance goes beyond the Social Security institutions that have traditionally existed in Latin America and beyond the scope of current public systems. Sector-wide social insurance strategies can include Social Security institutions, or other models of financing and delivery can replace them. Most current Social Security institutions do not meet the above definition because:

- a benefits package is not explicitly defined
- society-wide cross-subsidization of the poor from the rich is not achieved
- universal coverage is not achieved
- the health risks of the entire population are not pooled
- the actual number of covered people is not known

This document will present a number of the design options available to develop a social health insurance system.

Estimating the financial implications of reforms that include social health insurance is not an accounting exercise.

If there were no system-wide changes, one could estimate the financial implication of increasing coverage of a specific service or basket of services to a target population. One would need to know the average cost of the service, the size of the target population, and the expected utilization of this service among the target population group. To estimate the funds needed, one would merely need to carry out the following type of calculation:

Example:
Target population = 2000
Average cost = 50 colones
Expected utilization = .5 (50% of the people in the target population would be expected to use the service once per year)

Cost of adding service = (2000 * .5)* 50 = **50,000 colones**

Estimating the financial implication of social insurance reform implies considering the impact on efficiency, costs, quality, access, and utilization.

Estimating the financial implications of social insurance reform is not as simple as the above accounting exercise. If reforms are expected to improve efficiency, the average cost of providing the service may fall. In addition, if the reforms succeed in improving access and quality, clients may respond by seeking care more often, resulting in an increase in expected utilization by the target population group. If the reform changes the way providers get reimbursed so that they are paid a fee each time they provide this service, they may actively encourage people to obtain the service. This behavioral response by providers could result in an increase in expected utilization by the target population group as well. What will be the impact of improved efficiency on costs? How will clients respond to improved services quality? How will providers respond to new incentives? All these questions need to be carefully considered when estimating the financial impact of reform.

System-wide reform is about changing rules that alter behavior.

The above issues point out that system-wide reform is about changing rules that alter behavior. Much is known from world experience about how providers respond to different payment mechanisms. Salaries that are not determined by productivity incorporate weak incentives to provide services, while reimbursing providers on a fee-for-service basis generates strong incentives for providers to do too much. Insurance systems that are voluntary tend to attract people who know they are sick, resulting in a high-cost insurance pool, and eventual financial collapse. Mandatory participation in insurance is preferred but is not usually feasible to implement in developing countries with a large informal sector and a history of tax evasion. These and other issues must be thought through when considering the financing implications of social insurance reform.

Analytical framework for considering the financial implications of proposed social insurance reforms:

The following figure shows a model of the key functions that must be considered when assessing the financial implications of social health insurance reform. Each function can be carried out by distinct institutions, or combinations of functions can be carried out be a single institution.

- *Revenue Collection*: When designing a social health insurance system it will be necessary to determine sources of revenue and mechanisms for collection.

- *Social Insurance Fund:* The social insurance fund is the function that combines funds from the population and finances the social health insurance system. Social insurance funds are solidarity funds because high-income people and relatively healthy people subsidize low-income people and those who consume high-cost health services.

- *Health Plan*: A health plan is the entity that assumes the financial risk of providing a defined package of benefits to a specified population. Health plans can be financial intermediaries

that contract with providers or groups of providers that form an association to provide a package of health care services to a specific number of enrollees for a fixed payment per person. Networks of providers that provide a comprehensive package of services for a fixed payment are also health plans. The financial intermediary, the provider group, and the provider network are health plans because they assume financial risk. In each case, health services must be provided for a fixed payment per person whether all enrollees require care or no one requires care. Providers that charge fees for each service are not health plans; they do not assume financial risk because they are able to bill a payer for each service provided.

- *Providers:* Providers encompass all types of individuals and institutions that provide health services and are part of the formal health system. They include health care practitioners such as doctors and nurses, and institutions such as hospitals and pharmacies.

For example, Social Security institutions (SSI) in Latin America assume the roles of:

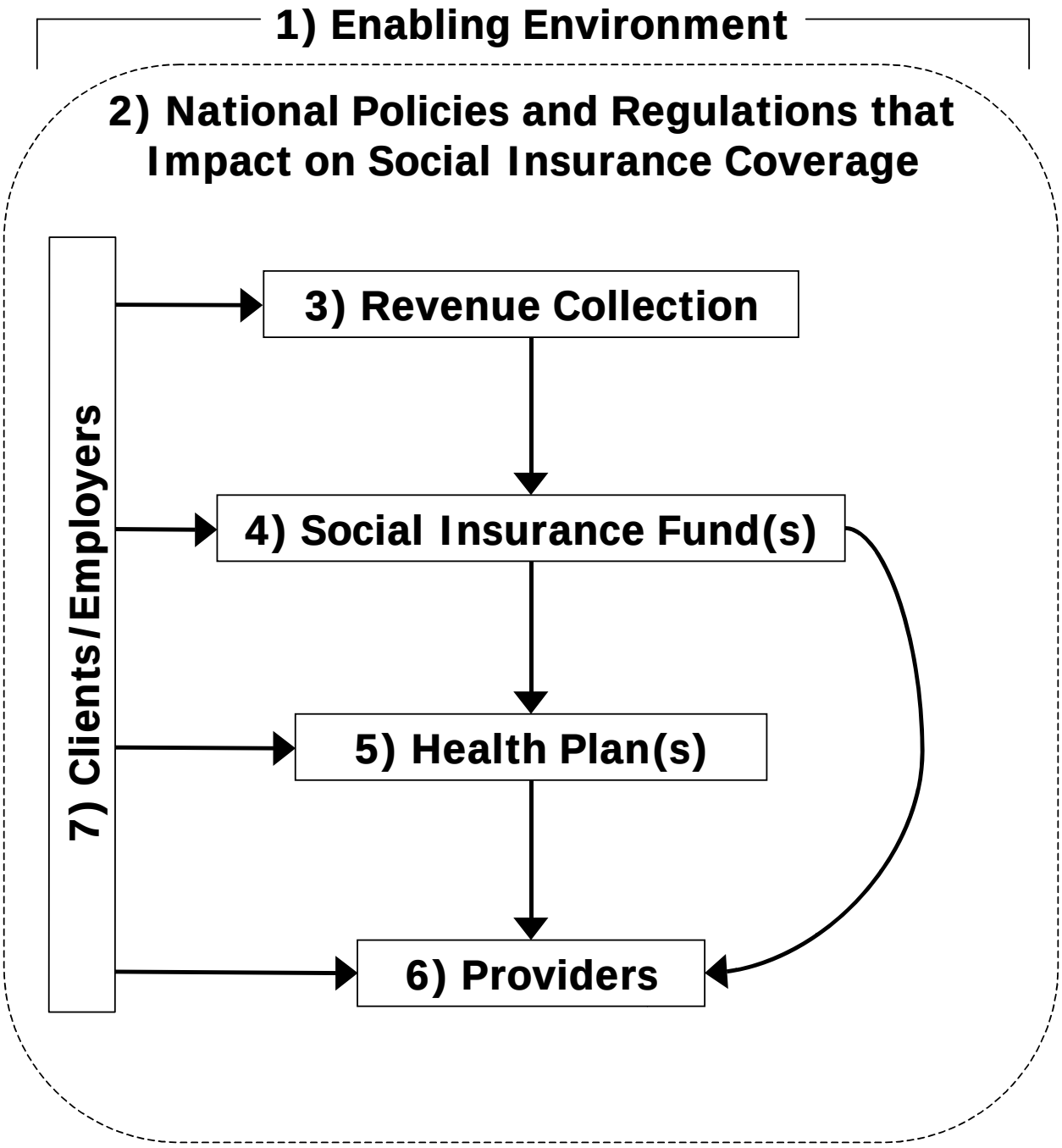
- Revenue Collector: Employers and employees both contribute to social security; the employer is responsible for remitting these contributions to the SSI.
- Social Insurance Fund: The SSI combines and manages funds and pools risk.
- Health Plan: The SSI assumes the responsibility, but not necessarily the financial risk, of providing services (though the package is not necessarily explicitly defined) to covered beneficiaries.
- Provider: The SSI usually employs many providers, although some contracting of services from the public and private sector also occurs in some countries.

Public health systems in the region do not collect revenue, as public systems are typically financed through general taxes. The public system does integrate the Social Insurance Fund, Health Plan, and Provider roles into one institution.

In contrast, health reforms throughout the world are moving toward designating distinct institutions to assume each role. This response is driven by the inadequate results produced by the current centrally-controlled and -managed integrated health systems.

The following structure will discuss each function in detail with the aim of providing a framework with which to assess current models of health systems and to evaluate possible reforms.

III. MODEL OF FINANCING FLOWS FOR SOCIAL HEALTH INSURANCE



1) ENABLING ENVIRONMENT

What obstacles and facilitating elements exist in the "enabling environment" of the health sector?

When examining the implications of various social insurance reform proposals it is critical to consider the "enabling environment" of the country. This includes all aspects of the circumstances of the country that impact on the health sector. This broad concept includes the development of the country's economy, the capacity of government to assume leadership and regulatory roles, and the realities of the current health financing and delivery system. Assessment of the enabling environment provides information about constraints that exist and interventions that might be needed to facilitate the implementation of a reform.

National income is a constraint.

One clear constraint is the overall income in a country. It is clearly not feasible to propose a health system that costs $1000 per capita in a country with a per capita income of twice that amount.

Governments lack the capability to effectively collect taxes.

Other constraints include the ability of governments to collect taxes from the population. Countries with a large informal sector and a history of tax evasion will not be able to implement a social health insurance scheme funded by a large increase in tax revenue unless more effective tax collection procedures are introduced, a change that spans beyond the health sector.

National reforms such as decentralization impact the health sector.

Health sector reforms often occur within an environment of other national reforms. One prominent example seen throughout the world is the move by many countries to decentralize decision making and control over resources from the central government to regional and local governments. Laws that mandate decentralized decision making may inhibit the range of interventions that can be nationally managed. One obvious example is that decentralization may limit the degree to which funds from relatively high-income regions can be transferred to relatively low-income regions.

Civil Service laws may seriously limit the range of feasible social insurance reform options.

Civil servants in most countries are paid a salary that is not dependent on their productivity and are guaranteed a job for life. These realities of the laws surrounding civil service employment can become major obstacles to implementing a model of social insurance that can encourage efficiency and improve quality.

The legal and regulatory framework for the sector may be inadequate.

Social insurance reforms usually involve the creation of new institutions and the transformation of existing institutions. New laws and regulations are needed to protect clients and to ensure that the social insurance system functions as designed. In most countries, a comprehensive review of existing laws and regulations is needed to identify conflicts between existing and new laws and to identify gaps.

The Ministry of Health may not be ready to assume a leadership and regulatory role.

Social insurance reforms often depend on a change in the role of the government and the Ministry of Health from payer and provider to steward and regulator. Careful consideration must be given to assessing the current capacity of the government to perform these new roles. A reorganization of the Ministry of Health may be necessary as well as a change in staff skills.

Powerful interest groups must be considered.

The current institutions that finance and deliver health services form a critical part of the enabling environment as well. Individuals who work in or own existing institutions form powerful interest groups that must be considered if social insurance reforms are to be successful. People who currently work in the health sector must have the capacity to assume new roles in the reformed system.

2) NATIONAL POLICIES AND REGULATIONS THAT IMPACT ON SOCIAL INSURANCE COVERAGE

Policies and regulations are needed to correspond with the chosen model of social health insurance. Policies and regulations can be distinguished by considering those aimed at clients, employers, health insurers, and providers.

Some social insurance schemes mandate universal participation, while others may target specific population groups and phase in universal participation over time.

Will all residents be mandated to participate or will the social insurance scheme be aimed at specified segments of society? Countries may choose to mandate that all households below a specified income range must participate and develop a plan to incorporate others over time. Another option is to begin by mandating participation by the formal sector and implement a plan to include the informal sector over time.

Policies need to be established to determine contributions from formal sector employees, employers, and the informal sector, taking into account potential effects on the formal sector labor market.

If contributions to the social insurance scheme are made through wages, it will be necessary to determine the formula for wage deductions. Some countries choose to split the contribution

between employer and employee. The contribution can be a fixed fee, a fixed percentage of the wage, or a percentage that rises as wages rise. Care must be taken to ensure that imposing deductions on wages for health will not distort the labor market by increasing tax evasion or reducing the size of the formal sector.

Mandating contributions from the informal sector brings challenges in addition to those discussed in the previous section. Imposing the same charge on the informal sector as is charged to the formal sector (employer plus employee) may pose a large financial barrier to participation. On the other hand, a policy that allows the informal sector to pay a smaller percentage of income or a smaller fee encourages employers to hire more workers through the informal sector labor markets with unfortunate consequences for the development of formal sector employment. No easy answers exist, but policy makers must be aware of economy-wide consequences.

Policies are needed to determine the degree of client choice of providers.

Decisions will be needed to determine the degree of client choice in the system. In current social security systems and public systems, the only client choice comes when clients choose to "vote with their feet" by paying a fee to consult a private practitioner. Social insurance systems can be organized to allow a wide degree of client choice and to include public, non-profit, and private sector providers. Allowing a wider choice of providers may encourage participation, reduce evasion, and increase coverage as people with preferences for private sector services may choose to participate.

Regulations that determine the requirements for providers and insurers to participate in the social insurance scheme have the potential to improve system-wide quality and to protect clients.

Once decisions are made to include private for-profit and non-profit providers in the social insurance system, regulations will need to be established that determine criteria for participation. Concentrating payment through a comprehensive social insurance system increases the potential influence of the public sector on provider behavior. For example, if providers must attend continuing education classes annually to participate in the system, they will be likely to follow the regulations so as to secure this important source of income. In this way, a social insurance system can improve overall quality of care. Other regulations about provider participation can include licensing of medical personnel and accreditation of facilities as a condition of participation.

Regulations and incentives that address acquisition of medical technology and additions to bed capacity can contribute to controlling system-wide costs of social insurance.

There is much evidence in the health economics literature that in certain circumstances "a bed built is a bed filled." This evidence also extends to the use of expensive medical technology; for example, once an MRI is in place it will be used. Social insurance systems can control the excessive use of bed capacity and expensive technology by developing and enforcing regulations that control acquisition of medical technology and require government approval for additions to

bed capacity. Reimbursement mechanisms that provide incentives to hospitals to control costs by managing length of stay and use of expensive technology are other approaches to control social insurance costs. In most settings it is necessary to apply both regulations and appropriate payment incentives to address this issue; regulations alone are not enough.

Regulations to ensure the solvency of financial intermediaries that assume financial risk are critical to protect client access to social insurance coverage.

Insurance regulation becomes extremely important if the adopted social insurance scheme transfers financial risk to financial intermediaries or provider groups. These intermediaries must be sure to keep money on reserve to pay for low-probability, high-cost events. Regulations to ensure the solvency of financial intermediaries that assume financial risk are critical to protect client access to social insurance coverage.

The public sector must increase oversight and monitoring to ensure that clients are protected in the reformed system.

The role of the public sector must change as part of the effective implementation of a comprehensive social insurance program that alters the way health services are financed, organized, and delivered. To be effective, the public sector is required to increase oversight and monitoring to ensure that clients are protected. This new role often involves new capacities not present in current ministries of health and may require a change in organization and functioning.

3) REVENUE COLLECTION

How will funds be collected to pay for health?

The following mechanisms are available to fund health care services:

- General tax collection
- Specific wage-related contributions to pay for health
- Voluntary insurance premiums
- Fees paid by households or employers to providers
- Other (lotteries, donations)
- Municipal taxes
- Interest on reserves

Are the available resources "enough"?

Before promising the population access to a wide range of services in a reformed social health insurance system, it will be extremely important to assess whether resources are sufficient to fund this package. Some actions may be taken to improve the availability of revenue for the health system, but policy makers must be realistic about resources that will be available in the near term. Plans to phase in more comprehensive packages of services and to cover an expanded group of beneficiaries can be developed as part of the implementation process of social insurance

reform. In addition, even if a country must deal with scarce resources, it can almost certainly make better use of the resources that are already allocated to the health sector.

Tax evasion is a serious problem.

Public systems in most developing countries are primarily funded through tax revenues. Taxes can be collected at the level of the central, regional, or local government. Taxes can be levied on income, property, sales, profits, imports, and exports. Some countries develop targeted taxes on products, such as cigarettes or alcohol, that affect health when consumed. Tax evasion and under-reporting of income and assets are serious problems in most developing countries. The architects of health reforms must carefully consider the practical feasibility of financing policies that rely completely on tax collection.

It is extremely difficult to collect wage contributions from the informal sector.

Many countries' social health insurance systems are funded by contributions that are often split between employees and employers. Social security systems in much of Latin America are one example. Contributions may be flat rate and equal, wage-related (percentage of wage), income-related (total income—not just wages—is taken into account), or may vary by region. In addition, contributions can be adjusted to reflect the health risk posed by individuals with a certain profile. Characteristics used can include age, gender, health status measures, chronic diseases, and history of prior utilization.

Countries are relatively successful at collecting wage contributions from people employed in medium and large firms. Collecting from the informal sector, from small businesses, and from independent workers has proven to be extremely difficult and no good solutions currently exist.

Small employers and non-poor informal sector workers are more likely to pay social insurance contributions if no free public care exists.

If free public health services continue to be available, small employers and informal sector workers have weak incentives to make social insurance contributions. This is because they know that if a catastrophic health event happens to their family the option of using free public services exists. It is possible to design a system to protect the poor by subsidizing their participation in social insurance while at the same time providing strong incentives for the non-poor to contribute. A strategy that can be effective at reducing evasion by the non-poor is to require people to pay the full cost of health services if they are not contributors to the social insurance pool. In Costa Rica, this approach effectively increased compliance and reduced evasion.

Well-functioning social insurance systems pool together high- and low-risk people.

Well-functioning social insurance arrangements combine together a number of people who face different degrees of risks of developing high-cost conditions in the future. When one person in the pool actually develops a high-cost condition, the cost of treatment far exceeds the amount of the contribution made by the individual to the insurance pool. The other people who remain

healthy end up helping to finance the care of the unlucky person who contracts the high-cost condition.

Insurance is attractive because it protects people against the possibility of high expenditures in the future. Ideal systems pool together all people in a country and are funded by contributions by all people. Contributions to social insurance systems are usually not related to the risk posed by a given individual. Instead, social insurance contributions are typically dependent on income. The result is that relatively high-income and healthy members of society subsidize the relatively low-income and sick.

A system that relies on voluntary contributions will not survive.

Experience throughout the world tells us that a system that relies on voluntary contributions will not work. People tend to contribute to the insurance plan only when they know that they will need care. Women may join when they learn they are pregnant; people purchase insurance right before needing a serious operation. The result is that insurance plans assume the risk of paying for care for a pool of people who cost more to care for than the average person. This threatens the financial viability of the insurance plan over time.

Households are paying for private care with out-of-pocket payments.

Much of the developing world is witnessing a rapid growth of private-sector health care providers. These doctors, hospitals, labs, and pharmacies often receive fees directly from households to pay for care. Analysis of household expenditures on health in many countries indicates that even the poorest households are paying fees to consult with private practitioners. One problem is that out-of-pocket expenditures can represent a large portion of household income, putting households in poverty if a member becomes sick.

Copayments can serve useful purposes in social insurance systems, provided that waivers for the poor are implemented.

Households can also pay copayments for care inside a social insurance system. Copayments can be either flat rate (per day, per visit) or a percentage of the fee. Copayments serve several purposes: they help to fund health services; they make clients realize that they have the right to demand quality services because they are paying; and they discipline clients to use appropriate levels of care in the health system and not to consult multiple providers for the same condition. When implementing a system of copayments, it is critical to design a mechanism to provide waivers for the poor.

Employers pay negotiated fees to providers to care for their employees, a form of self-insurance.

In some countries, arrangements exist between employers and providers to accept negotiated fees to care for the firm's employees. This is a form of employer self-insurance. A well-functioning social insurance system is likely to be successful at encouraging contributions from employers who formerly self-insured.

Funds also come from loans and donations.

Other sources of funds to the health sector include fundraising activities such as national lotteries, as well as national and international donations and loans from multilateral organizations such as the Inter-American Development Bank and the World Bank.

Department- and municipal-level taxes are potential underutilized sources.

Departments and municipalities can also raise taxes at the local level that could be used to help finance social services. To encourage local revenue generation, the central government could provide incentives to local governments in the form of a central government matching formula. The United States social insurance program for the poor, Medicaid, provides each state with a federal share of costs that is determined by the percentage of a state's population that falls below a federally-defined "poverty line." For example, if the match is 50%, each $1.00 spent by a state on Medicaid is matched by $0.50 from the federal government. This mechanism allows poor states to receive higher subsidies than richer states and encourages the collection of local revenue through incentives from the federal match.

Interest on reserves generated by insurance funds add revenue.

One function of the administration of the social insurance fund is to manage the fund to earn a financial return, without putting the funds at unnecessary risk.

4) SOCIAL INSURANCE FUND(S)

Once funds are collected to finance health services, an entity or entities are needed to distribute funds to pay for health care services. Social insurance funds can either pay providers directly or they can pay health plans. If social insurance funds pay providers directly, funds assume the financial risk of financing health care. If health plans are given a payment for each person enrolled with them, the health plan assumes the financial risk of providing the care and the payer is a conduit. Understanding who bears the financial risk is critical for understanding the incentives for cost control and efficiency improvement in a health system.

The social insurance fund function combines funds and pools risk.

The social insurance fund in this model is viewed as the entity that combines funds from the population and assumes the function of financing a social health insurance system for the population. It is a concept that includes the idea of a solidarity fund. It is a solidarity fund because high-income people and relatively healthy people end up subsidizing low-income people and those who consume high-cost health services.

Regardless of the model adopted, the "social insurance fund" function implies the creation of a new institution that manages and distributes funds.

The costs of establishing the social insurance fund institution should not be overlooked; nor should the challenges of implementation.

If fee-for-service payment is chosen, the paying institution needs a staff of people to process provider reimbursement, an information system with checks and balances to control fraud and abuse, and a financial management system to invest revenues to earn a safe return while unused. Tariff schedules will need to be developed, either by the social insurance fund or by another entity. If package payment or per-case payment is chosen, a similar staffing structure will be needed as well as a process to establish the rates.

If paying by capitation payment will be the dominant mode, then the paying institution will need a staff to process payments to health plans, an information system to control fraud and abuse, and a financial management system to invest revenues to earn a safe return while unused. Capitation payments that are fair and represent the expected utilization patterns and associated costs of people with certain characteristics (examples are age and gender) must be developed either by the social insurance fund or by another entity.

Benefits package contents must be determined because there is never enough money to provide all services to all people.

The definition of a benefits package depends on the country's financial resources, morbidity patterns, infrastructure, and preferences of the population. In most of the world, a benefits package includes primary care services and preventative care. Depending on the availability of resources, a country may elect to cover basic ambulatory services that are also important for public health and high-cost conditions that have the potential to cause financial ruin to a household. Other countries may choose to rank procedures based on the cost-effectiveness of treatment and the relative burden of the disease in the country. Decisions may be made to provide some benefits to target population groups that are not provided to the rest of the population. The poor may be fully subsidized while the high-income may only receive insurance coverage for catastrophic events. In other settings, the existing population covered by social security institutions may continue to receive the comprehensive package while the poor population is entitled to an increasing benefits package over time. In all cases, policy makers have to deal with the reality that there is never enough money to provide all services to all people. The health of the population is better served if explicit decisions are made about benefits package contents.

Paying by fixed budget implies low administrative costs, but poor incentives to increase efficiency or improve quality.

Social insurance funds that function similarly to the public health system or the Social Security system fund services based on negotiated budgets. Once the budget is negotiated, the funding commitment is clear, provided there is no possibility of requesting additional funds before the

year is completed. This form of payment requires a small staff and low administrative costs, but has very bad incentives for efficiency and quality.

Social insurance funds that pay fee-for-service have negligible control over costs, high administrative costs, high potential for fraud, and weak incentives to become more efficient or develop innovations in service delivery.

Social insurance funds that pay fee-for-service have negligible control over provider behavior. Providers submit bills for reimbursement and the payer pays them. This structure requires a full staff of people to process payment and an elaborate information system with checks and balances to ensure that providers are not submitting fraudulent bills. Having multiple payers magnifies the administrative costs, because each payer has to duplicate administrative structures. Incentives for cost containment are extremely low because providers have no incentives to become more efficient, to control costs, or to limit the number of procedures they provide to patients. It is also difficult for the payer to be able to forecast annual expenditures under a fee-for-service payment system. Fee-for-service reimbursement also has weak incentives to discover innovations to improve health care service delivery.

Social insurance funds that reimburse risk-assuming health plans have better cost control, lower administrative costs, better incentives for efficiency, and incentives to develop health care delivery innovations.

Systems that pay risk-assuming health plans have better cost control characteristics than fee-for-service reimbursement of providers. Administrative costs are lower because capitation payments can be made on a regular schedule and do not vary monthly. Paying capitation payments to health plans implies fewer transactions than reimbursing fees for each procedure, which limits transaction costs. Provider fraud is not a problem for the payer (though it may be a problem for the health plan), but there is a possibility that health plans may falsify their number of enrollees. The potential for system-wide cost containment is much better under capitated payment arrangements because payers can accurately predict annual expenditures. Because health plans receive a fixed payment to deliver a package of benefits, they face powerful incentives to control costs and to become more efficient. They also face strong incentives to introduce innovations into the way care is delivered if innovations can help to control costs.

The entity that assumes financial risk and the mechanisms available to control costs are central to decisions about the design of the health care system.

One social insurance fund or several?

The advantages of having one fund that pools together all sources of revenue rather than multiple funds are the following:

- no duplication of administrative systems
- no duplication of information systems
- reduced ability for provider fraud

- better pooling of low-cost and high-cost health risks
- better pooling of low-income and high-income contributions

A single payer would pool together funds from all sources and would finance all people in the country covered by one insurance system. In some countries there may be historical, social, economic, and political reasons for establishing or retaining more than one payer. If so, a coordinating body may be needed.

5) HEALTH PLAN(S)

As previously discussed, a health plan is an entity that receives a fixed payment to provide a package of benefits to a defined population. Because health plans receive a fixed payment whether or not their enrollees use services, strong incentives exist for health plans to find ways to deliver care most efficiently. Health plans would be expected to utilize a number of efficiency-enhancing measures.

Health plans can be financial intermediaries or they can integrate the financial management and provision of services.

The key element that distinguishes a health plan from a provider is the assumption of financial risk to provide a defined package of services to a defined population. The health plan can ensure the availability of the benefits package by contracting for all services from providers and provider groups. Health plans can also choose to manage their own provider network with employed personnel and health plan-owned facilities.

Health plans control costs and improve efficiency through incentive-based contracts and monitoring of providers.

Health plans respond to the cost control incentives by introducing interventions to control the behavior of providers. They do this by implementing incentive-based contracts that shift the financial risk of care to providers and by measuring and rewarding performance. Health plans use a combination of financial incentives and monitoring and supervisory interventions to increase efficiency, control costs, and control the quality of services. The section that discusses provider behavior presents the range of provider payment mechanisms in use and their implications.

"Gatekeepers" can control referrals and manage utilization.

One mechanism that has been used effectively throughout the world to control unnecessary consultation with high-cost specialists is the use of a "gatekeeper" to control referrals to higher levels of care. The "gatekeeper" is usually either a nurse practitioner or a general practitioner who can treat basic illnesses and can make the determination of whether referral to a specialist or to a hospital is required. If incorporated into a comprehensive health plan that covers a full package of benefits, this gatekeeper model has been very successful at delivering primary and preventative health care services and improving efficiency and controlling costs by managing the utilization of services. Paying capitation to primary health care groups that are not part of a

comprehensive plan carries the risk that the independent groups will respond to incentives by shifting risk onto specialists and higher levels of care in the system. A bonus or withhold system and an effective monitoring system would be needed.

Disease management, utilization review, and pharmacy benefits management are three examples of managerial interventions that can control costs and improve quality.

Health plans use a number of management interventions to control costs, increase efficiency, and improve the quality of care. Integrated approaches to managing the health of patients with chronic conditions, called "disease management programs," have shown considerable success in stabilizing health status and controlling costs. Disease management techniques have been effectively implemented for patients with chronic conditions such as asthma, diabetes, hypertension, and HIV/AIDS. By teaching patients to care for chronic conditions appropriately and by involving a multi-disciplinary group of health care providers (nurses, doctors, social workers, patient educators, pharmacists), patients are kept relatively stable and out of the hospital.

Another managerial intervention, called "utilization review," involves collecting and monitoring information on the prescribing and treatment practices of individual providers. The process of utilization review allows managers to identify providers who are not following treatment protocols. Interventions used to improve clinical practices range from individual discussion with providers to correct behavior to attaching financial incentives to achievement of desired performance. The result can be improved quality as well as cost control.

As the costs of pharmaceuticals rise and the dangers of inappropriate use increase, social insurance schemes need to incorporate interventions to control inappropriate use. In addition to utilization review, health plans in the United States contract with Pharmacy Benefits Management (PBM) firms to monitor and influence both provider and dispensing behavior. PBMs work with health plans to define a formulary of approved drugs, negotiate discounts with manufacturers, and influence generic substitution. PBMs also provide health plans with data to monitor prescribing and dispensing practices.

Health plans increase efficiency by substituting lower-cost clinical staff for higher-cost doctors.

Health plans also can improve efficiency by examining the utilization of different levels of trained staff and by substituting lower-cost clinical staff for higher-cost staff when appropriate. Health plans in the United States have effectively controlled costs and increased quality by substituting nurse practitioners for doctors to deliver primary health care services and to help people manage chronic illnesses. Nurse practitioners are perceived to be more understanding and better at developing relationships with patients—skills important for effective preventative and primary health care.

With client choice among health plans, quality is expected to rise as health plans improve quality to attract enrollees.

Quality is most likely to improve in a model where clients have a choice among health plans. If clients have a choice, the payment from the Social Insurance Fund follows the client to the chosen health plan. This means that health plans will need to provide the quality of services that clients prefer in order to attract enrollees. Plans that provide good customer service will attract people; plans that don't give clients good-quality service will fail. With only one available health plan, there is a danger that services will be under-provided and that quality of care will suffer.

The relative costs and benefits of having competing plans depend on the country and the structure of local markets.

The benefits of having competing health plans include efficiency, cost control, and better quality care. Costs of having multiple plans include the cost of marketing, duplication of administrative structures, and the possible negative effects of risk selection—actions taken by health plans to try to attract relatively healthy people. The decision of whether the benefits of competition outweigh the costs are very much country-specific. A strong government that can actively assume a leadership and monitoring function and has the authority to sanction health plans that are not functioning well may be the preferred model in some settings. It is likely that active monitoring will be needed in the rural and sparsely populated regions of most countries where multiple competing health plans are not likely to be an option. On the other hand, the benefits of competition could outweigh the costs in countries where multiple providers exist and there is experience with client choice and entrepreneurial activity.

6) PROVIDERS

How providers are organized and paid is central to the structure of any social insurance system. Some key decisions will need to be made about whether social insurance funds will cover patients who consult with providers in the private for-profit and not-for-profit sectors as well as the public sector. How funds will flow will have a large impact on the way providers are organized and overall efficiency of the system.

The payment mechanisms used to reimburse providers have important effects on system-wide costs and efficiency. Some payment mechanisms encourage over-provision of services while others run the risk of causing providers to restrict the provision of services that are necessary. The provider payment system influences both the quantity of services provided and their price. The combination determines total health care expenditures for a country.

Integrate vertical programs or maintain separation?

The public systems in many countries run vertical public health programs for interventions such as vaccinations and family planning. Decisions need to be made about whether to integrate these vital public health activities into the package of services funded through the social insurance system. If the decision to integrate vertical programs is made, an effective system to monitor implementation and impact will be needed.

Because providers want to maximize their incomes, they respond to the way they are paid by changing the amount of treatments and diagnostic tests provided to patients.

Providers are viewed as individuals who want to maximize their income as well as provide good health services. Depending on the payment system, providers can increase their income by providing as many treatments and diagnostic tests as possible, keeping patients for extra days in the hospital, and asking patients to return for additional visits even when it is not necessary. A well-designed provider payment system should enable providers to earn an adequate income without introducing incentives to provide unnecessary services and waste system resources or under-provide services.

Fee-for-service payment generates increases in quantities and increases in system-wide costs.

Fee-for-service payment systems can be completely open, but are often based on an established fee schedule. The schedule may be established by social insurance funds and health plans, or it may be determined as a result of negotiation. Providers can maximize their income under a fee-for-service reimbursement scheme by increasing the number of services provided or by reducing the quality (and therefore the cost) of each service provided. If there is competition, however, providers are less likely to skimp on quality and may actually respond by increasing quality to attract more fee-paying customers.

Flat per-case per-day hospital payment has weak incentives for cost containment but is easy to administer.

Per-case payment systems can be based on a flat rate per case or can differ depending on classes of diagnoses. Paying a flat payment per case per hospital day has poor incentives for cost control. Hospitals will respond by keeping patients in the hospital for too long because later days during recovery cost less than initial days, and it is better to have a hospital bed filled than empty. Administrative costs of paying daily rates are relatively low.

DRGs provide good incentives to controls costs if administrative systems are established to control "DRG creep."

The most widely-known case classification system is the "diagnosis related groups" (DRG) system, which classifies conditions into approximately 470 diagnostic groups. DRG or case-based payment systems are most commonly used to pay hospitals for inpatient treatment. Hospitals are forced to examine the number of resources used (operating theatre, supplies, technology, drugs, medical staff, and bed days) to treat a patient with a given diagnosis. Because a fixed fee is received per case, the provider faces incentives to find ways to minimize costs so that a surplus can be generated to use for other things such as increased income. On the other hand, providers also face incentives to code the diagnosis into a more generously reimbursed diagnostic group. This tendency, called "DRG creep," requires an elaborate monitoring system to control.

Capitation payments control costs and quality in regions with competition.

Capitation payments are made to health plans that receive a fixed payment per member per month to provide a defined package of benefits. The health plan may contract groups of physicians and hospitals to provide part of the benefits package and may pay those provider groups by capitation payment. If designed and implemented properly, capitation payment systems have many desirable qualities. For a capitation payment system to be effective, there must be a large enough base of enrollees to spread the financial risk. With few enrollees and a comprehensive package, one very sick enrollee could bankrupt the health plan. It is important for clients to have the opportunity to choose among competing capitated plans. Competition to attract clients should cause quality to increase, and the pressure to provide a defined package of benefits for a fixed premium should result in controlled costs. Because capitation payment is for a range of benefits, providers and plans have incentives to re-think the structure and organization of the delivery system. Capitation payments encourage a systemic focus as compared to fee-for-service payment that encourages a focus on individual procedures or diagnoses. Administrative costs of capitation payment methods are low compared with fee-for-service reimbursement systems.

Payment by salary has weak incentives to devote a large amount of effort.

A salary is usually based on a labor contract between an employer and a provider institution. The employer can be a hospital, health plan, pharmacy, lab, or other form of health-providing institution. Employees who are paid by salary usually are paid to work for a specific time period. Payment is not determined by the amount of patients seen or services provided but by time spent in the facility. Employed staff paid by salary have fewer incentives to perform well than independent staff, but this largely depends on the quality of management. Administrative costs of paying by salary are relatively low.

While budgets control system-wide costs, they incorporate weak incentives for client responsiveness.

Budgets are fixed sums paid to a provider to cover the total costs of services delivered during a time period. The focus is on covering the costs of provision (supply-based) as compared to a capitation payment that is intended to cover a basket of services for a client (demand-based). In countries with many rigidities in the enabling environment, fixed budgets become a way to continue to fund based on history and not on production or utilization of services by the population. Budgets can have desirable properties in environments where providers are relatively autonomous and can make decisions about reallocating resources and hiring and firing staff. Budgets have desirable incentives for cost control if budgets are truly fixed. On the other hand, incentives to provide quality services are weak because the funding is not tied to client demand. Adding to the problem of weak incentives is the fact that medical staff paid by salary have weak incentives to expend effort because their payment is not in any way tied to their productivity. Financing institutions with budgets involves relatively low administrative costs.

Bonuses and withholds can be used to pay based on achievement of performance targets.

In addition to the above payment mechanisms, payers can offer bonuses for performance and can withhold a portion of payment until specified indicators of performance are reached. Performance-based reimbursement is gaining in prominence throughout the world to ensure that entities that receive payment from the government or from large payers like Insurance Purchasing Alliances in the United States achieve desired performance targets. The establishment of a bonus and withhold system involves creating performance targets that are feasible, measurable, and that are not subject to false reporting. Administrative costs depend on the measurement and monitoring system.

Hybrid systems that combine several payment mechanisms can encourage performance improvement.

It is possible to combine several forms of reimbursement. For example, in some countries, civil servants paid by salary have the opportunity to earn performance bonuses. Capitated primary health care providers may also receive bonuses for managing referrals within recommended guidelines. A portion of the fixed budget paid to an institution can be withheld until production targets are met.

The following table provides a summary of the different payment mechanisms and highlights some of their features.

Table 1:. Payment Mechanisms

Mechanism	Incentives for efficiency	Incentives for volume	Impact on increasing system-wide costs	Impact on improving quality	Information required to construct the mechanism	Admini-strative complexity	Potential for billing fraud
Salary	⇓⇓⇓⇓	⇓⇓	∅	⇓⇓	⇑	⇑	⇑
Global Budgets	⇓⇓⇓⇓	⇓⇓	⇑	⇓⇓	⇑	⇑	⇑
Fee-for-service	⇓⇓	⇑⇑⇑⇑	⇑⇑⇑⇑	⇑	⇑	⇑⇑⇑	⇑⇑⇑
Fixed fee per hospital day	⇓⇓	⇑⇑⇑⇑	⇑⇑⇑⇑	⇑	⇑	⇑⇑⇑	⇑⇑⇑
Payment by packages of care	⇑⇑	⇑⇑	⇑	∅	⇑⇑⇑	⇑⇑	⇑⇑
Primary care capitation	⇓	⇓⇓	⇑⇑	⇑	⇑⇑	⇑	⇑
Full capitation	⇑⇑⇑	⇓⇓	⇓⇓	⇑⇑	⇑⇑	⇑	⇑
Capitation adjusted for enrollee risk charac-teristics	⇑⇑⇑	⇓⇓	⇓⇓	⇑⇑⇑	⇑⇑⇑⇑	⇑⇑	⇑
Bonus	⇑⇑⇑⇑	depends on circum-stances	⇓⇓	⇑⇑⇑⇑	⇑⇑⇑	⇑⇑	∅
Withholds	⇑⇑⇑⇑	depends on circum-stances	⇓⇓	⇑⇑⇑	⇑⇑⇑	⇑⇑	∅
Mixed models	depends on circum-stances	depends on circum-stances	depends on circum-stances	depends on circum-stances	depends on circumstances	depends on circum-stances	depends on circum-stances

7) CLIENTS/ EMPLOYERS

A key decision is to determine what population groups will be covered.

A critical decision to be made is to determine what population groups will participate in the social insurance system. Will the focus be the poor and near poor, the formal sector, children, and/or women of reproductive age? If the goal is to include the entire population eventually, a process of phasing in additional groups will need to be defined. The target population groups to be subsidized must also be determined.

Clients are the main source of funds through taxes, insurance contributions, and user fees.

Clients are also taxpayers, payers of insurance contributions, and payers of user fees. Social health insurance decisions must take into account constraints and realities of each environment, such as the feasibility of collecting direct contributions from the informal sector.

A process to means test the population is necessary.

Part of the design of a social insurance system is the development of a process to means test the population to determine which members of society are poor enough to receive subsidies and which members can pay. Careful thought is needed to determine a transparent process to identify the target population for subsidization.

Clients need access to reliable information to choose among health plans.

If the chosen model allows clients to make choices, it will be important to ensure the availability of adequate information. This could be a direct function of the government or it could be contracted out to an independent entity. Performance indicators are important because they allow clients to compare and choose among various health plans. If money from the social insurance fund will follow clients to health plans, an information system based on data that are "self-reported" by health plans will be subject to biases. The financial benefits of looking good to clients will tend to encourage health plans to report data that are complimentary and perhaps unreliable.

Employers are more informed purchasers than individual clients.

If the decision is made to allow some choice among health plans in your social health insurance scheme, you will need to determine who has the responsibility to make this choice. Employers may be better able to evaluate the overall quality of health plans than clients. The reason is that employers often maintain a dedicated department that specializes in employee benefit decisions. This department is likely to have more skill and information than individual clients to make informed health plan purchasing decisions. In addition, because employers bring a large pool of enrollees to health plans (and therefore money), employers may have more power than individual clients to influence the quality of services offered by health plans.

8) CONCLUSION

Throughout the region, countries are examining problems in the financing and delivery of health services. Countries in the region are at different stages of discussing, planning, and implementing social insurance reforms. This document provides a framework for countries to think through the financing implications of proposed reforms. The current health system in countries can be assessed using the framework and expected financial implications of proposed social insurance reform models can be evaluated.

The realities of the enabling environment must be considered, as well as a realistic assessment of what changes are feasible and in what time period. Countries also need to know the amount of money currently available to fund health services and to think of new ways to increase tax collection and social insurance contributions. The role of the social insurance fund, or solidarity fund, is critical. The mechanisms for distributing funds to health plans and providers have implications for system-wide costs through behavioral incentives and costs of administering each type of system. Establishing priorities for the use of limited resources to provide defined benefits packages to priority client groups is a vital part of health reform.

IV. THE ASSESSMENT QUESTIONNAIRE

The assessment questionnaire is helpful for working through many of the issues involved in social insurance. The following seven broad areas form the questionnaire. Each section of the questionnaire also includes concrete suggestions to assist you in locating crucial information for the decision-making process. For example, if you are discussing revenue collection, you might find it useful to obtain a copy of current Social Security regulations, or to obtain information on tax collection rates from the Ministry of Finance.

- **Examining the "enabling environment" of the health sector**
- **National policies and regulations that impact on social insurance coverage**
- **Collection of funds to finance social insurance**
- **Assuming the function of combining and managing funds to finance social insurance**
- **Assuming the financial risk of providing defined benefits to a defined population**
- **Organization and compensation of providers**
- **Coverage and "voice" of the clients and employers**

In addition, each section of the assessment questionnaire includes a checklist so that you can see where potential gaps still exist (that is, where you will need to get further information in order to do a thorough analysis).

SECTION 1:

What obstacles and facilitating elements exist in the "enabling environment" of the health sector?

Before beginning this section, please ensure that you have access to the following:

- data on average income per capita, the government's tax collection record, Civil Service laws

This section requires decisions to be made about...

- the feasibility of increasing the rate of tax collection
- how Civil Service laws might be changed to facilitate reform efforts
- what new laws and regulations are needed to support social insurance reform
- what the new role of the Ministry of Health will be

1. **What obstacles and facilitating elements exist in the "enabling environment" of the health sector?** Many elements comprise the enabling environment. The development of the country's economy, the capacity of government to assume leadership and regulatory roles, and the realities of the current health financing and delivery system are all factors. The following questions will help you to determine your own country's "enabling environment":

   1.1. *National income per capita?* Any social insurance system will have to consider the overall economic picture. For example, it would not be feasible to propose a social insurance system with a cost of $1,000 per capita if the country's total per capita income is $2,000.

   1.2. Effective tax collection?

      1.2.1. What is the overall tax collection rate in the country?

      1.2.2. Is there a history of tax evasion?

      1.2.3. How large is the informal sector? If a large part of the population works in the informal sector, it will be difficult to fund social health insurance programs through large increases in tax revenue.

   1.3. *Other current and proposed national reforms?*

      1.3.1. What are the current and potential reforms being discussed, and how might they affect the implementation of a social insurance program? For example, if the country is decentralizing decision making and control over resources to

regional and local governments, this will inhibit the range of interventions that can be managed at the national level.

1.4. Current Civil Service laws? Effect on the social insurance reform process?

1.4.1. What are the current Civil Service laws? If civil servants are guaranteed a job for life and paid a salary that does not depend on their productivity, it will be difficult to introduce reforms that can encourage efficiency and improve quality.

1.4.2. Can Civil Service laws be changed, or are there other ways to introduce reform?

1.5. Adequacy of the legal and regulatory framework for the sector?

1.5.1. If new institutions are created and existing ones transformed, what new laws and regulations are needed to protect clients and to ensure that the system functions as it was designed?

1.5.2. Have laws and regulations been reviewed comprehensively to identify areas where conflicts exist, or where there is a gap in the regulations?

1.6. Readiness of the Ministry of Health to assume a leadership and regulatory role?

1.6.1. If social insurance reform entails a change in government's role (e.g., from payer and provider to steward and regulator), has the current capacity of the government been carried out to ensure that it can assume its new role?

1.6.2. If changes must happen, how will the Ministry of Health be reorganized?

1.6.3. What new skills must staff have or learn in order to function effectively under the new structure?

1.7. Powerful interest groups to be considered? Institutions that currently finance and deliver health services are also a critical part of the enabling environment.

1.7.1. Who owns or works in these institutions?

1.7.2. What new roles will they play under a transformed system?

1.7.3. What skills will they need in order to play these new roles?

1.8. ***Potential sources of information:*** National Statistics Office; United Nations or other international bodies that have reports on comparative performance, regulatory environment, etc.

SECTION 2:

What are/will be the national policies and regulations that impact on social insurance coverage?

Before beginning this section, please ensure that you have access to the following:

- copy of existing and proposed legislation affecting health care
- rules/regulations about the current social insurance plan

This section requires decisions to be made about...

- who will participate in the new social insurance plan
- how workers in the informal sector will be included in the system
- strategies to work toward enacting new legislation, if conflicts or gaps exist in current laws
- the structure and scope of contributions to the proposed plan
- a time line for phasing in the new plan
- whether clients will have a choice of provider and/or plan
- who will have monitoring and oversight responsibility for the new system
- whether increasing taxes is a feasible way to finance the system

2. What are/will be the national policies and regulations that impact on social insurance coverage? Many areas are encompassed here. If new institutions are created and existing ones transformed, new laws and regulations may be needed to protect the users of the system and ensure that the reforms are functioning as they are intended. Furthermore, the country may have specific laws—such as "Health for All"—that might constrain decisions about which services will be covered as part of the benefits package. In general, a comprehensive review should be undertaken to identify potential conflicts between new and existing laws, and to identify areas where no legislation exists. The following questions will give you an idea of the areas to be considered:

2.1. *Mandated participation (for formal sector, or for all)?*

2.1.1. Who participates currently in your social insurance plan?

2.1.2. Does it include only workers in the formal sector, who contribute to Social Security through payroll deductions?

2.1.3. Do employees in the informal sector participate?

2.1.4. If the intent is to spread the risk over as large a group as possible, how do you open up the system to people who are not currently in the formal sector?

2.1.5. Do any laws need to be changed to increase participation?

2.1.6. If you plan to phase in participation over a period of time, what is the time frame, and what kinds of benchmarks will you have so you know when you have reached your goal?

2.2. Mandated contributions?

2.2.1. Again, who is contributing currently?

2.2.2. How will this change—if at all—if the social health insurance program is expanded to cover more people?

2.2.3. If the informal sector is included, how will contributions be collected?

2.2.4. Will the structure (e.g., percentage of earnings) be the same for the formal and informal sectors?

2.2.5. Will contributions be based on wages alone, or on total income (for example, if someone has income from investments not related to job wages)?

2.2.6. Will the percentage of the contribution stay the same, or will higher-income workers contribute proportionally more?

2.2.7. Will there be "floors" or "ceilings" on the payments (e.g., employees in the top income bracket contribute 3% of their salaries, subject to a cap of $1,500 per year, whereas employees in a lower income bracket contribute 2.5% of their salaries, subject to a $1,000 yearly cap)?

2.3. Client choice of providers and plans?

2.3.1. Will clients have the opportunity to choose a preferred provider or health plan, or will it be assigned based on where clients live or work?

2.3.2. Will there be different reimbursement rates, depending upon which plan or provider is chosen, or will the reimbursement rate be the same for any plan or provider within the system?

2.4. Regulations?

2.4.1. What are the current regulations?

2.4.2. Do any of them need to be changed, given what you know about the design of the new social health insurance system?

2.4.3. Where are there gaps in the regulations?

2.4.4. Do any laws/regulations constrain decisions about what can be offered as part of the benefits package?

2.4.5. Are there regulations that set forth criteria for provider participation, thus creating the potential for quality improvement and customer protection (e.g.,

continuing education classes; licensing of medical personnel; accreditation of facilities)?

2.4.6. Do regulations about solvency of financial intermediaries already exist, or must they be created?

2.4.7. How long does it take to get legislation passed?

2.4.8. Are there elections in the near future, and do you expect that the incoming government will favor ongoing reform or not?

2.5. Oversight and monitoring?

2.5.1. Who has—or will have—the responsibility for overseeing the system? Public-sector involvement here is crucial to effective implementation.

2.5.2. Who will monitor quality, utilization, cost, efficiency, etc.?

2.5.3. Who will manage the disease surveillance system so that infectious diseases are detected early?

2.5.4. If a client has a complaint, who is responsible for investigating the matter and seeing that disputes are resolved?

2.6. ***Potential sources of information:*** Written copies of the national and local laws; colleagues in the Legislature; political "watchdog" groups; current Social Security regulations.

SECTION 3:

How are/can funds be collected to finance social insurance?

Before beginning this section, please ensure that you have access to the following:

- information on how Social Security is structured currently (e.g., who contributes? Do employers and employees split contributions?)
- data on the proposed social insurance benefits package: what services are included, what expected cost and utilization patterns are, etc.

This section requires decisions to be made about...

- who will contribute to the social insurance scheme
- which benefits will be offered, and to whom
- who will collect the funds
- whether copayments will be charged

3. How are/can funds be collected to finance social insurance? Funds are collected through a variety of mechanisms, including general tax collection, wage-related contributions, voluntary insurance premiums, fees paid directly to providers, special taxes on products that affect health (e.g., cigarettes or alcohol), municipal taxes, interest on reserves, and other sources such as lotteries or donations. Which combination of these will be used to generate funds for a social health insurance system?

3.1. Mechanisms for collection?

3.1.1. If contributions are split currently between employees and employers, how will contributions be collected from the informal sector, or those working for small businesses or independently?

3.1.2. Where no formal payroll structure exists, how will contribution levels be set?

3.1.3. If tax evasion is a problem, what alternatives exist?

3.1.4. Can taxes be collected at the local level, or can targeted taxes (e.g., cigarettes, alcohol) be used?

3.1.5. How heavily does the social insurance system design rely on tax collection for its funds?

3.2. Sufficiency of funds?

3.2.1. Which benefits will be offered under the insurance scheme?

3.2.2. What are the expected costs and utilization patterns of the services that are part of the benefits package?

3.2.3. Given the package of benefits to be offered, and the expected costs and utilization rates, will the system have enough projected revenue to pay all its costs?

3.2.4. Are there other sources of funds that might be tapped, such as lotteries, donations, loans, and taxes at the local level?

3.2.5. Will the system pool together a group that is diverse enough to ensure that cross-subsidization will work? That is, will the relatively healthy and relatively well-off subsidize the relatively sick and low-income members of society?

3.3. Feasibility of collecting from the informal sector?

3.3.1. If the informal sector is large, how will contributions be collected from this group?

3.3.2. How heavily would the system rely on this group for its funding?

3.3.3. Will other difficult segments (for example, small businesses and independent workers) be included or not?

3.4. What institution(s) collect(s) funds?

3.4.1. Will funds be collected by Treasury, by Social Security, or by some other institution?

3.4.2. If copayments are charged, will they be retained by the institution where services are provided or passed back to the insurance fund to be pooled with other sources of funds?

3.4.3. If copayments are charged, what system will be set up to ensure that the poor receive waivers?

3.4.4. Do the fund administrators manage it to earn a financial return without putting it at unnecessary risk?

3.5. ***Potential sources of information:*** Current Social Security regulations; National Statistics Office; United Nations or other reports on tax collection percentages and sources of revenue.

SECTION 4:

What institution(s) do/will assume the function of combining and managing funds to finance social insurance?

Before beginning this section, please ensure that you have access to the following:

- information about potential constraints (e.g., decentralization laws) that would determine whether more than one fund will be created
- survey or other data to show which benefits people want from social insurance

This section requires decisions to be made about...

- whether there will be one or several social insurance funds
- how to have cross-subsidization if more than one fund exists
- who will be accountable for various aspects of the fund
- how funds will be allocated

4. What institution(s) do/will assume the function of combining and managing funds to finance social insurance? Assuming that funds have been generated, they need to be combined and distributed to pay for health care services. The fund may pay health providers directly, or it may pay health plans—entities that assume the financial risk of providing a package of benefits to a defined population. If health providers are paid directly, the fund assumes the financial risk and a key decision is what type of payment mechanism will be used. Conversely, if the fund pays health plans to provide the services, health plans will receive an established payment per person and will assume the financial risk of covering services. If there are multiple payers, the administrative complexity will increase. Furthermore, the fund allows for pooling of risk by combining *relatively* sick people with *relatively* healthy people. Some questions to be answered include the following:

4.1. *Single or multiple funds?* One fund may pool together the resources generated through various means. It has several advantages, including no duplication of administrative or information systems; reduced chance of provider fraud; better pooling of contributions from lower- and higher-income groups; and better pooling of higher- and lower-risk groups. All people in the country covered by social health insurance would be within the same system. However, there may be reasons why more than one fund exists.

4.1.1. If more than one fund exists, how will the different funds be coordinated?

4.2. Mechanism for cross-subsidization? If there is one fund, it is much easier to cross-subsidize, as discussed before.

4.2.1. However, if the system is decentralized or there are multiple systems for other reasons, how will cross-subsidization be achieved?

4.3. Management and distribution of funds?

4.3.1. What will the cost be to establish a social insurance fund institution?

4.3.2. Who actually assumes the risk? If the fund pays providers directly, the fund assumes the financial risk. On the other hand, if the funds make established payments to health plans based on the number of enrollees in the plan, the health plans assume the financial risk.

4.3.3. What type of payment system will be chosen (e.g., fixed budget, fee-for-service, capitation payments)? Each has certain implications in terms of administrative complexity, potential for fraud, incentives for efficiency and volume, impact on increasing costs across the system, impact on improving quality, and so on. Please refer to the "Payment Mechanisms" chart in the Framework for a summary of the various mechanisms and their implications.

4.3.4. Will the social insurance fund or another entity establish rates (e.g., fee-for-service tariff schedules, package/per-case payment rates, or capitation rates)?

4.3.5. What will the rates be?

4.4. Contents of benefits package?

4.4.1. Given the country's financial resources, morbidity patterns, infrastructure, and preferences of the population, which services will be included in the benefits package?

4.4.2. Will the package include primary and preventive care services only?

4.4.3. Will it include ambulatory services and/or high-cost conditions that would place a severe economic burden on an individual or family?

4.4.4. Will it include only the most cost-effective treatments for a particular illness?

4.4.5. Will the same package be offered to everyone, or will targeted groups such as the poor receive additional services?

4.5. Allocation mechanisms? Whether there is one health fund or several funds, allocation mechanisms will need to be determined. If the fund makes capitated payments to health plans based on number of enrollees, some of these questions do not need to be asked at the national level; they are operational decisions to be made by the health plans themselves. On the other hand, if the fund pays providers directly, these decisions must be made at the national policy level.

4.5.1. What are the basic guidelines?

4.5.2. Will allocations be based on population, or on percentage of high-risk and/or poor people in each area?

4.5.3. How much will be allocated to primary and preventive care, and how much will be allocated to catastrophic care?

4.5.4. If different procedures are used to treat the same illness, will the fund reimburse costs only for the most cost-effective procedures?

4.5.5. If there are several funds—for example, one fund for each province—how will resources be allocated among provinces so that they are distributed more equitably?

4.6. Accountability? There are many levels to this question.

4.6.1. How are incoming funds accounted for?

4.6.2. What checks and balances are needed in the information system to control fraud and abuse?

4.6.3. What financial management systems must be put in place to invest revenue so that it earns a safe return while it is unused?

4.6.4. Who assumes the financial risk of financing health care?

4.6.5. If someone has a problem or dispute that needs to be resolved, is it clear where the responsibility and accountability lie?

4.6.6. Who has the power to make decisions about the functioning, structure, allocation, etc., of the fund?

4.7. ***Potential sources of information:*** Other country or area pilot studies (keeping in mind that no one system works for every situation, and adaptations must be made to account for local realities, constraints, and opportunities).

SECTION 5:

What institution(s) do/will assume the role of health plan—that is, assuming the financial risk of providing a defined package of benefits to a defined covered population?

Before beginning this section, please ensure that you have access to the following:

- information on the current situation in terms of who assumes financial risk
- information on any constraints to contracting with different providers (i.e., a situation where the social insurance plan both assumes financial risk and provides services directly)

This section requires decisions to be made about...

- whether the social insurance system will have financial intermediaries
- what the incentive structure will be
- what management interventions will be used

5. **What institution(s) do/will assume the role of health plan—that is, assuming the financial risk of providing a defined package of benefits to a defined covered population?** In many countries, multiple health plans exist, both in the public and private sectors. A provider group may agree to provide a package of benefits to enrollees for a fixed payment per month, or a financial intermediary may contract with providers to provide services to its subscribers. The key question is who assumes the financial risk, and the reason for the risk is this: the plan receives a flat amount of money based on its number of enrollees. It is obligated to provide services to those enrollees—either directly or through a contract with a provider group—whether everyone uses the services extensively or not. Clearly, if utilization is high, the plan assumes a higher cost than if very few people are using the services. The following questions should help to clarify some of the issues.

   5.1. *Financial intermediaries?* Will the system have financial intermediaries—that is, will there be entities that collect a fixed rate per enrollee and subsequently contract with a provider or provider group to deliver the health services, rather than directly providing the services?

   5.2. *Integrated assumption of financial risk and delivery of services?* Instead of having intermediaries, will an entity assume the financial risk and provide the services directly to its enrolled members?

5.3. *Will there be one health plan or several?* Several benefits of competing health plans include efficiency, cost control, and better quality. However, there are also costs involved, such as marketing, duplication of administrative structures, and possible negative effects of risk selection. Based on your country's situation, a decision must be made as to whether the benefits outweigh the costs.

5.3.1. Will clients have a choice among health plans? If more than one plan is offered to clients, health plans are more likely to be concerned with improved quality. If clients are assigned to a plan based on geographic location or some other factor, the health plan has no incentive to provide good customer service.

5.4. *Incentives used?* What types of incentives are built into the chosen system to control the behavior of the providers? The following questions are relevant at the national policy level only if the social insurance fund will pay providers directly. Otherwise, it is up to the health plan(s) to answer these questions.

5.4.1. For example, are providers paid a flat salary, or do they get reimbursed on a fee-for-service basis? Note that if the method is fee-for-service, providers do not have an incentive to control costs, become more efficient, or to limit the number of procedures provided.

5.4.2. Will performance-based reimbursement and/or withhold incentives be used? Performance-based reimbursement rewards providers for achieving certain performance targets (such as quality indicators), or withholds payment if indicators are not met. These types of incentives can help to control costs and improve efficiency and quality.

5.5. *Role of the "gatekeeper"?* Health plans may choose to institute a "gatekeeper" function to control unnecessary consultation with high-cost specialists.

5.6. *Management interventions used?* In addition to incentives, it is common to have management interventions to manage a health plan well. Again, these are not national policy decisions unless the fund pays providers directly. Which, if any, of the following management interventions will be used?

- Utilization review is one example; it involves comparing different doctors' rates of prescribing antibiotics, admitting patients to the hospital, and so on.
- A second example is disease management, which may be used for chronic conditions, or may simply involve trying to follow a treatment "norm" or "critical path" to reduce variation in quality and quantity of treatment.
- Pharmaceutical benefits management (PBM) is another intervention. "[These] schemes contract with insurers to manage pharmacy services. The PBM provider negotiates drug prices with suppliers, sets the formulary of drugs to be used, reviews and adjudicates claims, reviews patterns of utilization by patients and

providers, audits the program to prevent fraud and abuses, and implements programs to make drug use more rational....Although PBM appears to add another middleman and additional expense, successful PBM schemes reduce costs to insurers."[2]

- Even if the provider does not have a PBM, creation of an essential drugs formulary can help to control drug costs. Rather than stocking many hundreds of different drugs, pharmacists—or purchasing agents—can purchase generics instead of name brands, and reduce or eliminate duplicate drugs (for example, three or four different brands of acetaminophen). Since each purchase involves a larger quantity, volume discounts may be available (e.g., the manager orders 1,000 tablets per month from one vendor instead of 250 tablets each from four vendors). Also, since the manager is dealing with fewer suppliers, there are fewer purchase orders to prepare and to trace. Physicians are part of the process so that they are aware of the medications carried by the pharmacy.

5.7. *Substitution of different levels of staff?* A health plan could choose to improve efficiency in some cases by substituting lower-level clinical staff for higher-cost doctors when appropriate. For example, nurse practitioners could deliver primary health care services and help patients manage chronic illnesses.

5.8. *Impact on quality, cost control, efficiency, access, equity?* Any change to a system will have impacts on quality, cost, efficiency, access, and quality. Some of these changes will be expected, while others may be unforeseen. A cost reduction or quality improvement may provide people with a larger incentive to use services, and this could mean longer waiting times, overcrowding, misplaced medical records, and so on.

5.9. ***Potential sources of information:*** See the bibliography at the end of this document.

[2] From Management Sciences for Health, *Managing Drug Supply: The Selection, Procurement, Distribution, and Use of Pharmaceuticals, Second Edition, Revised and Expanded*, Kumarian Press, 1997, p. 618.

SECTION 6:

How are/will providers be organized and compensated?

Before beginning this section, please ensure that you have access to the following:

- information on current payment systems
- information on vertical programs offered
- list of defined benefits for the social insurance program

This section requires decisions to be made about...

- how physicians will be organized
- how hospital staff will be employed
- how ancillary services will be provided
- how providers will be compensated

6. How are/will providers be organized and compensated? The way providers are organized has many implications in terms of funds flow, patient referral patterns, administrative systems needed, and so on. Provider payment mechanisms also have important effects on system-wide costs and efficiency. Some encourage over- or under-provision of services; the payment system thus affects both quantity and price of services provided. Several key issues are outlined below.

6.1. *Role of the private and not-for-profit sectors?* Will social insurance funds cover patients who consult with providers in the private and not-for-profit sectors, or will the funds be available only if public-sector providers are used?

6.2. *Preventive care? (Vertical programs integrated?)*

6.2.1. Do separate vertical programs exist for interventions such as vaccinations and family planning?

6.2.2. Will these programs be integrated into the social insurance benefits package, or will they stay separate?

6.2.3. If the vertical programs are integrated, what mechanisms will be put in place to ensure that their implementation and impact are monitored effectively?

6.3. *Ambulatory care? (examples: practice groups, risk assuming, fund holding)*

6.3.1. At the physician level, how will doctors be organized?

6.3.2. Will they be employees of the public sector, or will they be privately employed, with a contract to provide services to social insurance patients?

6.3.3. Will contracts be with individuals or physician groups?

6.3.4. Do the physicians assume any of the financial risk?

6.4. Hospital care? (examples: hospital based networks, outpatient surgery) At the hospital level, questions similar to those in section 6.3 arise.

6.4.1. Will hospital staff be employed by the public sector, or will they be private-sector employees with specific contracts for providing the agreed-upon package of services?

6.4.2. How will they be paid?

6.4.3. Will a diagnosis-related group (DRG)-type system be implemented to help control costs?

6.4.4. If so, will proper monitoring take place to avoid "DRG creep"?

6.5. Laboratory services? Will these be provided within the facility, or will the services be contracted out?

6.6. Pharmacy benefits? Will pharmacy benefits be managed by the provider, or will the provider contract with a pharmaceutical benefits management company?

6.7. Compensation? What payment system will be used for the various types of providers? For example, a fee-for-service payment system may encourage over-provision of services and lead to higher costs. These questions are especially important if the social insurance fund pays providers directly. Otherwise, these questions need to be answered by the health plan, but are not national policy issues.

6.7.1. For each payment system option under consideration (e.g., fee-for-service, capitation, flat payment per case or per day, salary, fixed budget), are the implications understood in areas such as administrative cost, potential for fraud and abuse, incentives for cost containment, and incentives for quality? The table on "Payment Mechanisms," included with the Framework, summarizes many of these implications.

6.7.2. Given the country's current constraints, which system(s) are most feasible at this time?

6.7.3. Looking ahead, as health reform progresses, which system(s) should be established in the future?

6.7.4. What kind of transition process must be set up to work toward the desired system(s)?

6.8. ***Potential sources of information:*** See the bibliography for relevant references.

SECTION 7:

Who will be covered and how much voice do/will clients and employers have?

Before beginning this section, please ensure that you have access to the following:

- data on who is currently covered by Social Security
- population data for potential target groups for social insurance coverage (e.g., number of children under 5; number of women of reproductive age; number of people living in extreme and relative poverty)

This section requires decisions to be made about...

- who will be covered by social insurance
- whether the same benefits will be offered to all people covered under social insurance, or whether some enrollees (e.g., the poor) have access to more comprehensive services
- whether enrollees may choose from more than one health plan, or whether they will be assigned to a particular plan or facility
- whether enrollees may choose different benefit options
- how to provide information to clients
- whether enrollees must pay for social health insurance, and if so, how much
- whether subsidies for the poor and other vulnerable groups will be implemented, and how

7. **Who will be covered and how much voice do/will clients and employers have?** As mentioned earlier, decisions will need to be made about who will be covered and which services will be covered under a social health insurance system. The potential enrollees can also be thought of as clients, because they will be consuming the health services provided. They are also taxpayers, contributors to insurance, and payers of user fees. If users of services view themselves as clients, they may be more willing to praise a job well done or complain if they feel that they have not been treated properly. Part of the design of a social insurance system is the development of a process to means test the population to determine which members of society are poor enough to receive subsidies, and which members can pay for services. In addition to individuals, employers may also be thought of as clients. Since they make many purchasing decisions related to benefits for their employees, they are often better-informed purchasers than individual clients.

7.1. Covered population?

7.1.1. Will the entire population will be covered, or will coverage be extended only to vulnerable and high-risk groups?

7.1.2. Will everyone receive the same coverage, or will there be a tiered system? For example, the poor might receive more comprehensive coverage, while the non-poor might receive coverage only for catastrophic illness or expense.

7.1.3. If coverage is not offered to everyone—or different levels of coverage are offered to different groups—how will the population be means tested to determine who is poor and who is not?

7.2. Choice?

7.2.1. Will clients or employers be able to choose among competing health plans, or will they be able to use their benefits only at one facility?

7.2.2. Can they choose who provides health care to them?

7.2.3. Will they have a choice of different benefit options, perhaps corresponding to different contribution levels?

7.2.4. If someone already has basic insurance, can he or she choose to use the social health insurance for a few specific options?

7.2.5. What is the impact of the proposed system on employers, and what role might employers play? Employers make certain purchasing decisions, and they can be a powerful force in the health policy arena, especially if the formal sector is well-developed and the employers represent many employees. Like the health system, employers are also concerned with controlling costs The impact of any system on employers must be considered; also, employers may be willing and able to help promote health initiatives (e.g., anti-smoking campaign) that will reduce the costs they must pay for their employees' health care.

7.3. Information to choose?

7.3.1. How much information will be available to clients and employers?

7.3.2. Will they be able to compare rates, disease outcomes, and other performance measures when choosing a health plan?

7.3.3. If clients or employers have a choice of health plans, how similar will the plans be?

7.3.4. What mechanisms are necessary to ensure that clients and employers can make accurate comparisons among plans?

7.3.5. How accurate and reliable are the comparison data on different health plans? Are the data from an independent source, or do the health plans self-report?

7.4. Payment?

7.4.1. How will direct contributions for social insurance by clients and employers be determined?

7.4.2. Will the general tax rate increase to fund the program?

7.4.3. Will there be a new or modified payroll deduction process?

7.4.4. Will copayments or other user fees be charged at health facilities?

7.4.5. If the poor and other vulnerable groups are subsidized, how will that mechanism function?

7.4.6. How will people know whether they are expected to pay, and how much?

7.4.7. If fees are instituted, will this deter people from seeking care when they really need it?

7.5. ***Potential sources of information:*** See the bibliography for relevant references.

V. THE SIAT MODEL[3]

1) BRIEF DESCRIPTION OF THE MODEL

The SIAT includes a simple spreadsheet model (siat-model-530.xls). You can fill in key data on population, health spending, and so on, as the data become available to you. Then you can use the model to perform "what-if" analyses and test some of your assumptions. A sample is provided so you can see how the model looks when it is completed (siat-sample.xls). The sample shows data for the fictitious country of Centralia.[4]

- *Population characteristics:* The model is set up for you to enter population and other data by province, department, state, or whatever other administrative division you require. There is also space in the model to enter data by age group within each administrative division (e.g., children under the age of 5; women of childbearing age). If province- or department-specific data are not available, these percentages can be estimated from the population data based on age and sex distribution. Data on poverty rate by province/department should also be included, especially if the poor are considered a high-priority group for social insurance coverage.
- *Public funding available:* The model has a sheet each for Ministry of Health and Social Security budget/spending patterns.
- *Focus of spending:* This may be included with the above; it would be worth noting how much spending goes to secondary and tertiary care, for example, especially if the defined benefits package has primary care as its focus.
- *Cost of services:* estimated costs for a basic basket of services (or whatever the agreed-upon benefits package is called) are entered in order to produce the scenarios. There is also a place to input the cost of a more comprehensive basket of services for comparison purposes.
- *Scenarios:* once the basic data are entered, the scenarios will calculate automatically. Pre-defined charts are included in the model as well; again, they will display once the data are entered.

A note on what the model is *not:* the SIAT model does not present "the answer" to the question of financing social insurance. As will become apparent if any "what-if" analyses are done, the results depend on the assumptions entered into the model. For example, if poverty rates drop by five percentage points, the aggregate cost of providing basic services to the poor would be expected to drop as well. The cost of the basic basket itself may be subject to some debate. Costs are also affected by utilization patterns, efficiency, and other factors. Nevertheless, different scenarios can be entered into the model to produce a range of figures; the model helps

[3] The complete Social Insurance Assessment Tool, including the Excel spreadsheet Model is available in English and Spanish from **The Manager's Toolkit** on MSH's **Electronic Resource Center** (http://www.erc.msh.org/toolkit) or from the LAC Initiative's website (http://americas.health-sector-reform.org).

[4] See Lewis and Eichler, "Social Health Insurance in Centralia: A Case Study," Boston: Management Sciences for Health, 2000, to learn more about Centralia.

to quantify the financial implications of different policy decisions regarding social health insurance.

2) SPECIFIC INSTRUCTIONS

Model conventions.

The model has a few conventions that have been designed to make it as easy to use as possible.

- Areas where the user is expected to enter data are highlighted in green. Some of the data (such as population per square kilometer, or number of doctors per administrative division) are not essential to the calculations of the scenarios. However, they are included because they help provide a more complete profile of the situation of a particular administrative division. If the data are not available, these columns can be left blank without affecting the scenarios.

- Areas in the model that are not shaded green contain formulas or functions. There is no need for you to enter information here; once you type in the data in the appropriate place, the formulas will be calculated automatically.

- Once you enter the names of each administrative division and the corresponding population figures, these will automatically appear on the other worksheets in the workbook. You will not have to enter the information more than once. Similarly, when you enter Ministry of Health and Social Security data on the respective worksheets, the summary information gets carried over automatically to the Summary page.

- The model is "protected;" that is, data can be entered in the indicated areas, but the headings, formulas, and other model contents are restricted. If you try to type in a restricted area, you will get an error message. If you need to make changes to any part of the model, you may "unprotect" each worksheet by going to the ***Tools*** menu, choosing ***Protection,*** and then choosing ***Unprotect Sheet.***

- Since the graphs/charts are predefined, they may look strange before data are entered into the model. For example, the **MOH_level_chart** tab will display a pie chart showing how much of the Ministry of Health budget is devoted to primary, secondary, and tertiary care. However, without data in the model, all that displays is one line, and all the labels are superimposed. Once the data are entered, the chart should display properly.

1. **First, enter population data by administrative division.** The model is set up to accept data for up to 30 separate administrative divisions. This should be sufficient for most countries (for example, Ecuador has 21 provinces; El Salvador has 14 departments; Honduras has 18 departments; Jamaica has 14 parishes; and Nicaragua has 15 departments and two autonomous regions).

1.1. If you have division-specific data (province, department, state, parish), you may enter them directly on the **Summary** tab of the workbook. Fill in the name of each division, its population, its area in square kilometers (or miles), number of doctors, percentages of extreme and relative poor, and numbers of women of reproductive age (WRA) and children under the age of five. As noted above, the area (square kilometers) and number of doctors are not essential to run the scenarios.

1.2. If you have more than 30 divisions, you will need to insert extra rows or combine categories, depending upon which option makes more sense for you and for how resources will be allocated. See the later section on **"Modifying the Model"** for step-by-step instructions on how to add extra rows.

1.3. If you have fewer than 30 administrative divisions, you may "hide" the unused rows so that your final printout is more compact. To hide rows, use the mouse to highlight the rows you want to hide (for example, to hide rows 9-20, highlight cells A9 through A20), choose the ***Format*** menu, then ***Row,*** then ***Hide.*** Please note that you may have to unprotect the sheet first; if the sheet is protected, the ***Hide*** menu choice will not be accessible to you. Also note that if you hide unused rows on the **Scenarios** worksheet tab, it will make your charts look better (otherwise the charts will have empty space in them).

2. You may need to estimate some of the figures if you do not know the percentages of people living in poverty, or the number of women of reproductive age and children under five.

2.1. If you need to estimate any figures, try to obtain population data for both urban and rural areas from the most recent census estimates or a recent Demographic and Health Survey (DHS). These data may be entered on the **Population** tab of the workbook. Then, if you know approximate numbers of population by division—and whether the division is primarily urban or rural—you can estimate the number of people in certain age groups. For example, if women of reproductive age (say 15-49 years old) make up 28% of the population in urban areas, and the country's capital (population 1 million) is comprised entirely of urban areas, then the approximate number of women of reproductive age is 1 million * 28% = 280,000 women of reproductive age.

2.2. Note: as with land area in square kilometers and number of doctors, the population distribution data by age and sex is not essential to the scenarios, unless you are using these data as described above, e.g., to estimate the number of women of reproductive age.

3. **Next, enter data on the Ministry of Health budget.** Click on the **MOH_budget** worksheet tab and type in the MOH budget allocation by administrative division (column D). If you have data on how the budget is broken down by level of service—primary, secondary, and tertiary—enter those data in cells B38 through B40.

4. **The next step is to enter data on the Social Security budget.** Click on the **Social_Security_budget** tab and enter the budget figures for each administrative division in

column E. In column C, enter the number of current workers, pensioners, and their beneficiaries by administrative division.

5. On the **Summary** worksheet tab, enter total estimated health spending in cell B44, and total estimated Gross Domestic Product (GDP) in cell B46. The formulas will calculate per capita spending, percentage of GDP that is spent on health, and percentage of MOH, Social Security, and private-sector health spending as a percentage of total spending on health.

6. If you want or need to **display the summary results in U.S. dollars** as well as your own currency, enter the appropriate exchange rate in cell D49. The conversions will be done automatically.

7. **Finally, go to the Scenarios worksheet tab.** Enter the cost of the basic basket of health services in cell B3, and the cost of the comprehensive basket of health services in cell B5. The scenarios will calculate automatically. The predefined charts associated with the **Scenarios** page are **basic1_chart** (showing percentage of MOH budget to provide basic services to the extreme poor, total poor, and total population); **basic2_chart** (showing percentage of MOH budget to provide basic services to the relative poor, women of reproductive age [WRA] and children under 5, and poor WRA and children under 5); **comp1_chart** (similar to **basic1_chart**, but using figures for the comprehensive basket of services); and **comp2_chart** (similar to **basic2_chart**, but using figures for the comprehensive basket of services).

8. **To perform sensitivity analysis,** determine the areas where your estimates might be subject to debate. Do you have more than one set of figures for the percentage of people living in poverty? Do you have different estimates for what it would cost to provide a basic basket of health services?

    8.1. Enter all the relevant data for one set of assumptions and save the model under a different name (e.g., assumption1.xls).

    8.2. Then make changes to the data in the model for each additional set of assumptions you have, and save each one under a new name (e.g., assumption2, assumption3, assumption4).

    8.3. Print out your results so you can compare them. Each worksheet has a predefined "footer" that prints at the bottom of the page, so you will know which figures correspond to which assumptions.

3) MODIFYING THE MODEL (ADDING EXTRA ROWS IF NECESSARY):

1. First, unprotect the following worksheet tabs: **Summary**, **Scenarios**, **MOH_budget**, and **Social_Security_budget**.

2. Begin with the **Summary** worksheet tab.

2.1. Place your cursor in **row 6** and insert as many rows as you need. Fill in the names of the different administrative divisions (this will make it easier to edit the other sheets, because you will be able to see where you need to insert rows on the other relevant pages).
2.2. Highlight cells **D5** through **U5**. Press the Copy icon (or choose Edit, Copy from the pull-down menus). In column **D**, highlight the rows that you just inserted, and choose Edit, Paste Special, Formulas from the pull-down menus.

3. Click on the **MOH_budget** tab. You will notice that some of the division names are missing (for example, if you have 33 provinces, you inserted three rows on the **Summary** tab, and the provinces are named One, Two, Three, Four, Five, Six, and so on, you will see that provinces Two, Three, and Four are not listed on the **MOH_budget** page).
   3.1. Place the cursor in cell **A5** and insert the same number of rows that you did on the **Summary** tab.
   3.2. Highlight cells **A4** through **E4** and click Copy.
   3.3. Highlight the blank cells in column **A** (the rows you just inserted) and choose Edit, Paste Special, Formulas from the pull-down menus. You should now see all the names of the divisions as you entered them on the **Summary** tab.

4. Click on the **Social_Security_budget** tab. You will notice that some of the division names are missing, as they were on the **MOH_budget** tab.
   4.1. Place the cursor in cell **A5** and insert the same number of rows that you did on the **Summary** tab.
   4.2. Highlight cells **A4** through **F4** and click Copy.
   4.3. Highlight the blank cells in column **A** (the rows you just inserted) and choose Edit, Paste Special, Formulas from the pull-down menus. You should now see all the names of the divisions as you entered them on the **Summary** tab.

5. Click on the **Scenarios** tab. Again, you will see that some division names are missing.
   5.1. Place the cursor in cell **A10** and insert the same number of rows that you did on the **Summary** tab.
   5.2. Highlight cells **A9** through **O9** and click Copy.
   5.3. Highlight the blank cells in column **A** (the rows you just inserted) and choose Edit, Paste Special, Formulas from the pull-down menus. You should now see all the names of the divisions as you entered them on the **Summary** tab.

6. Finally, go to each of the following worksheet tabs: **Summary**, **Scenarios**, **MOH_budget**, and **Social_Security_budget**. For each one, choose Tools, Protection, Protect Sheet, OK from the pull-down menus.

VI. SELECTED BIBLIOGRAPHY AND OTHER RESOURCES

Normand, Charles, and Weber, Axel. *Social Health Insurance: A Guidebook for Planning.* WHO/SHS/NHP/94.3. World Health Organization, Geneva, 1994.

Management Sciences for Health. *Managing Drug Supply: The Selection, Procurement, Distribution, and Use of Pharmaceuticals, Second Edition, Revised and Expanded.* Kumarian Press, West Hartford, Connecticut, 1997.

Internet resources: Many resources are available on the Web. You can do a search for a key term, but you may find that there are thousands of web pages on a particular topic. Be as specific as you can (for example, search for "user fees" AND "developing countries" to narrow down the number of "hits" that will appear on your screen. You may also need information on a country's population, economic situation, et cetera. There are many links to statistics pages; the following are a few helpful ones.

- *US Census Bureau's International Data Base (population data, projections, urban/rural distributions, etc.):* http://www.census.gov/ipc/www/idbnew.html
- *University of Michigan web page with links to many Central Banks, National Statistics Offices, and other helpful country information:* http://www.lib.umich.edu/libhome/Documents.center/stforeig.html
- *The Dominican Republic's National Statistics Office (not listed on the U. Michigan web site):* http://www.estadistica.gov.do/
- *US State Department's Country Reports On Economic Policy and Trade Practices:* http://www.state.gov/www/issues/economic/trade_reports/
- *The United Nations, CEPAL (Comisión Económica para América Latina y El Caribe):* http://www.cepal.org/

PUBLICATIONS OF THE LATIN AMERICA AND THE CARIBBEAN REGIONAL HEALTH SECTOR REFORM INITIATIVE

1- Methodology for Monitoring and Evaluation of Health Sector Reform in Latin America and the Caribbean. (English and Spanish)

2- Base Line for Monitoring and Evaluation of Health Sector Reform in Latin America and the Caribbean. (English and Spanish)

3- Análisis del Sector Salud en Paraguay (Preliminary Version)

4- Clearinghouse on Health Sector Reform. (English and Spanish)

5- Final Report – Regional Forum on Provider Payment Mechanisms (Lima, Peru, 16-17 November, 1998). (English and Spanish)

6- Indicadores de Medición del Desempeño del Sistema de Salud

7- Mecanismos de Pago a Prestadores en el Sistema de Salud: Incentivos, Resultados e Impacto Organizacional en Países en Desarrollo

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9- Cuentas Nacionales de Salud: Ecuador

10- Cuentas Nacionales de Salud: Guatemala

11- Cuentas Nacionales de Salud: México

12- Cuentas Nacionales de Salud: Perú

13- Cuentas Nacionales de Salud: República Dominicana (Preliminary Version)

14- Cuentas Nacionales de Salud: Nicaragua

15- Cuentas Nacionales de Salud: El Salvador (Preliminary Version)

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20- Strengthening NGO Capacity to Support Health Sector Reform: Sharing Tools and Methodologies

21- Foro Subregional Andino sobre Reforma Sectorial en Salud. Informe de Relatoría. (Santa Cruz, Bolivia, 5 a 6 de Julio de 1999)

22- State of the Practice: Public-NGO Partnerships in Response to Decentralization (English and Spanish)

23- STATE OF THE PRACTICE: PUBLIC-NGO PARTNERSHIPS FOR QUALITY ASSURANCE (ENGLISH AND SPANISH

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28- PLAN DE INVERSIONES DEL MINISTERIO DE SALUD 2000-2002

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