Public Intervention in Health Insurance Markets: Theory and Four Examples from Latin America

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This article examines rationales for public intervention in health insurance markets from the perspective of public economics. It draws on the literature of organizational design to examine alternative public intervention strategies, including issues of contracting, purchaser provider splits, and regulation of competition. Health insurance reforms in four Latin American countries are then considered in light of the insights provided by the theoretical literature.

Health care expenses and lost labor earnings due to illness—not to mention the direct effects of feeling lousy and dying young—represent a major source of risk for individuals and families. Exposure to such risks is costly in itself (if individuals are risk averse), but can also have long-term effects, especially on the poor. Selling assets, withdrawing children from school to care for ill parents, and exiting the labor market can leave low-income families trapped in poverty. This article addresses the role of government in spreading and reducing health risks with particular emphasis on the design and organization of the relevant institutions in Latin America.

Faced with wide disparities in both health needs and access to medical care across regions and income groups, and with continuing pressures on public finances arising from the macroeconomic crises of the 1980s and 1990s, a number of countries in the region have adopted wide-ranging health sector reforms that continue today (Greene, Zevallos, and Suarez 1999). Generally, among the higher-income countries, there has been a move toward extending explicit insurance coverage to those outside the formal labor market. At the same time, these countries have examined the ways in which insurance and health care have been delivered and have instituted reforms that are meant to improve allocative and production efficiency in the sector. Lower-income countries in the region have not proceeded as far in terms of explicit health insurance reform, which requires a certain administrative capacity, and have tended to concentrate on running public hospitals and clinics better.

The World Bank Research Observer, vol. 17, no. 1 (*Spring 2002*), pp. 67–88

Large-scale changes in health insurance and health care markets inevitably involve significant public intervention. This article examines the arguments in favor of such intervention from a public economics perspective. Having identified market failure and redistributional rationales for public intervention, it addresses the important issue of how the government should intervene. This is effectively a question of organizational design, incorporating ideas from industrial organization, contract theory, and theory of the firm. The article undertakes a detailed examination of the reforms pursued in Colombia, Argentina, Brazil, and Chile. These countries followed strategies that reflect a variety of routes toward the goals of expanding formal insurance coverage and improving the efficiency of health service delivery.

Reasons for Public Intervention in the Health Insurance Sector

The theoretical literature on the performance of insurance markets is well developed. However, not all of the market failures that may arise in such markets necessarily justify public intervention. This section examines the efficiency and equity reasons for intervention in health insurance markets, paying specific attention to the informational constraints facing governments.

Market Failure in the Health Insurance Sector

Inefficiencies in health insurance markets derive primarily from information asymmetries and imperfect competition and less from standard public goods and externality characteristics.

Moral hazard and adverse selection. The role of information in the performance of insurance markets has been widely appreciated. In the health insurance literature, Feldstein (1973), Pauly (1968), and Zeckhauser (1970) show how asymmetric information at the ex post stage—that is, after an insured event has occurred—can lead to overconsumption of care and the costs of this ex post moral hazard are offset by reducing the level of insurance. A similar inefficiency results from ex interim moral hazard, when individuals fail to take precautionary actions after an insurance contract is signed. Unfortunately, there is little the government can do to correct these inefficiencies. Only by taxing or subsidizing goods in related markets (for example, cigarettes and immunizations, respectively) can it indirectly alter incentives in a welfare-improving fashion (Greenwald and Stiglitz 1986).

Although moral hazard derives from asymmetric information that is generated after individuals enter into insurance contracts, adverse selection occurs in markets where information is held asymmetrically at the date of contracting. A competitive insurance market in a population with heterogeneous ex ante risk character-

istics may perform inefficiently if insurance contracts cannot be differentiated on the basis of these risks. Either relatively low-risk individuals will be driven from the market (Akerlof 1970) or they will be constrained to purchase incomplete coverage (Rothschild and Stiglitz 1976). A number of studies have provided evidence of the existence of adverse selection in insurance markets (Cutler and Zeckhauser 1997; Cutler and Reber 1998). However, government intervention cannot easily correct these market failures. Universal and uniform coverage can be mandated, but the resulting resource and risk allocations are not Pareto-comparable with the initial equilibrium.

Imperfect competition. The models of adverse selection reviewed above identify failures of competitive insurance markets. But even in the absence of adverse selection problems, insurance markets may yield socially suboptimal resource and risk allocations if firms have market power. Such market power may derive from information imperfections on the demand side, contributing to switching costs (which make it difficult for new firms to attract customers). Increasing returns in administrative costs suggest that a somewhat concentrated industry is likely to be observed in equilibrium.

In standard industrial organization models, although market power typically leads to allocative inefficiency, competition is generally welfare improving. However, in insurance markets with information asymmetries, competition may sometimes have negative effects on allocative efficiency. For example, insurers may reduce the quality of coverage to attract low-risk individuals (Jack 2001). This kind of active (as opposed to adverse) selection might suggest public intervention to control the extent (or at least type) of competition in the insurance market.

Consumer protection through regulation. Consumers are subject to potential exploitation by health insurers in two respects. First, insurers may provide or finance low-quality care; and second, they may behave imprudently in their roles as financial managers. Both of these issues suggest a role for direct regulation, but many countries may lack the capacity for such regulation. The first problem might require devoting significant medical expertise to checking up on the actions of providers of care. The second would call for employing individuals with significant financial sector experience to check the insurers' books. When countries do not have enough trained individuals to perform the underlying tasks of medical care delivery and financial risk management, diverting resources to regulation entails a high opportunity cost.

Moral hazard (that is, overconsumption of health care) can be mitigated by basing insurance coverage not on incurred medical expenses but on the basis of a physician's judgment of a patient's need. Such a contract is efficient as long as information about needs is held symmetrically by all parties. In practice, the physician is the primary source of this information, so that when acting as the patient's agent, the physician

confers an information advantage on the patient vis-à-vis the insurer. However, when acting for the insurer, the physician may put the patient at a disadvantage and warranted treatments could be withheld. Public intervention—including monitoring of physicians' decisions and actions—might then be required to maintain quality.

In some respects, insurance companies perform similar functions to banks. Banks facilitate intertemporal trades (saving and dissaving) implemented through contemporary interpersonal trades (lending and borrowing). Insurance companies facilitate trades between uncertain states of nature implemented through interpersonal pooling of current risks. Similarly, just like banks, insurance companies hold financial assets that must be invested by managers.

Dewatripont and Tirole (1994) use an incomplete contracts model to show that bank managers can be given appropriate incentives to perform by transferring control from equity holders (who have relatively weak incentives to interfere with management) to debt holders (whose incentives to interfere are stronger) when bank performance as measured by the value of assets is poor. The role of government is then to act as a representative of small, uncoordinated debtors, and the theory rationalizes public takeovers of distressed banks as a means of providing incentives to managers.

Similarly, if the value of an insurance company's assets falls enough, the government may wish to intervene on behalf of small policyholders and take over the administrative functions (perhaps contracting out such administration to another healthy insurer).

Equity

At a conceptual level, being at high risk of needing medical attention reduces an individual's available (expected) consumption opportunities. Consequently, the government may wish to redistribute resources between individuals with identical money incomes but different health risks. One way of implementing such redistribution is through uniform pricing (known as community rating) of insurance policies across individuals. However, requiring private firms to community rate may only exacerbate the selection problems that already exist.

It is important to note that, even if selection issues were unimportant, it would still be only second best to require uniform insurance pricing. The first-best policy, of course, is to redistribute income (lump sum) from low risks to high risks and require each to buy insurance at the actuarially fair price (that is, to allow price discrimination by firms). Such redistribution is notoriously difficult, even more so when income inequality itself is high, as it is in many Latin American countries.

Henriet and Rochet (1999) analyze the optimality of a uniform public insurance system when individuals differ in both their health risks and incomes. They find that in the absence of moral hazard, a comprehensive policy providing full insurance to all individuals is part of an optimal tax and insurance system. This result relies to some

extent on the assumption that individuals with different incomes nonetheless face the same potential losses, albeit with different probabilities. In fact, the poor may prefer additional income transfers and less extensive public insurance to being offered the same level of coverage as the nonpoor.

In the presence of health risk and income differentials across the population, and in the absence of first-best redistributive taxation, governments will likely wish to couple a progressive general tax (for example, an income tax) with a system of health insurance (privately or publicly supplied) that delivers subsidized insurance to the poor but allows coverage to increase with income. One means of effecting such a graduated insurance profile is to have a mixed public/private system of insurance in which the government provides (or mandates) a given base level of insurance and individuals are permitted to top off their coverage through private purchases (Besley and Coate 1991) or to opt out of the public system and purchase private insurance (Gouveia 1997).

The Nature of Government Intervention

The arguments above suggest that, due to market inefficiencies and redistributive concerns, governments may wish to control individuals' choices about insurance in certain ways. But the discussion does not explain how such control over choices should be effected. This section examines the effects of alternative public interventions—including explicit contractual arrangements between insurer and provider, organizational choices (for example, vertical integration) and competition—on the costs and quality of insurance.

Contractual Arrangements: Motivating Physicians

Physicians, like other workers, need to be motivated to make decisions that appropriately trade off patient benefits and costs. These decisions require effort; when physician effort is not directly purchasable (that is, contractible), incentives may be difficult to generate without exposing the physician to undesirable risk. Two extreme cases are the salaried physician and the decentralized fund holder. Under the first arrangement, an insurer (possibly the government) pays the physician a fixed amount, independent of the physician's supply of effort, and reimburses nonphysician expenses (for example, laboratory tests). At the margin, doctors will tend to substitute out of personal effort and into complementary inputs and will face little risk. A decentralized fund holder, who is given a fixed budget to finance all incurred costs (including the cost of the physician's own effort), will have strong incentives to choose the right input mix but might be exposed to considerable risk. The tradeoff, as in any moral hazard problem, is between incentives and risk.

This tradeoff at the provider level is not specific to the public sector. Private insurance companies also must induce physicians to implement insurance contracts at minimum cost, and so face a similar contracting problem. However, some endogenous differences across the public and private sectors may emerge that imply different contractual relationships between payers (the government or insurance companies) and providers of medical care. For example, if public insurance is aimed at the poor, then in the absence of accurate eligibility tests, self-selection constraints may require that the public system provide a relatively low quality of service. Inducing low effort from physicians who provide services to the public system might be easier than inducing higher effort. Higher service quality is a characteristic of private insurance companies that, in equilibrium, serve the nonpoor. Thus, it is likely that incentive schemes are relatively flat for physicians serving the public insurance system and that compensation schedules employed by private insurers are steeper. Even inducing low effort might be difficult when services are provided to the poor because providers might have to live in rural areas or poor urban ones. Hammer and Jack (forthcoming) describe some models addressing incentive issues in these cases.

Another reason that public and private insurance systems may provide different incentive schemes to physicians is that physicians may represent a heterogeneous group. If they differ in their aversion to risk, ethical priorities, or job satisfaction, it may be optimal to offer one kind of compensation contract to one group of physicians and another kind to a second group. However, these arguments suggest reasons for different ways of paying physicians in the delivery of health insurance, but they are not necessarily the outcome of a public/private mix of insurance provision.

Purchaser-Provider Split versus Vertical Integration

Instead of writing a detailed contractual agreement between insurer and physician, the two parties instead might decide to integrate into a single organization and rely on bargaining protocols to determine the allocation of rents. Traditionally, in many countries in Latin America and elsewhere, public insurance systems have been highly vertically integrated. However, recent reforms have focused on separating the functions of insurance and provision, through the so-called purchaser-provider split wherein explicit contractual arrangements govern relationships between insurers and providers.

By contrast, traditional private insurance was of the fee-for-service type (that is, indemnity plans), whereby a physician would send a bill to the insurer for covered services. This is one kind of explicit contract. Over time, however, private insurance companies have moved toward a more integrated organizational structure, bringing physicians in house or at least adopting long-term contractual relationships with them. This apparent anomaly between the evolution of the organization of public and private systems can be understood in a number of ways, including soft budget constraints and common agency.

Soft budget constraints in the public sector. Both institutional developments (purchaser-provider split and organizational integration) might represent attempts to provide physicians with stronger incentives, within constraints that differ between the public and private sectors. For example, it might be difficult for a government bureaucracy to commit to funding a public sector employee prospectively. Future renegotiation in the event of high costs (when it is difficult to withhold extra funding) or low costs (when it is difficult to resist the temptation to expropriate profits) induces a soft budget constraint that limits incentives. A purchaser-provider split might insulate a public payer from the incentive to renegotiate a contract and would harden an otherwise endogenously soft budget constraint. Conversely, the easiest way for a private payer to provide a physician with incentives might be to make the physician a shareholder in the insurance firm. (Of course, there are obvious free-rider problems when physicians are paid on the basis of group profits and not individual contributions thereto.)

Common agency in public institutions. Another way to understand the opposing directions of reforms in the public and private sectors is to look more closely at the nature of the purchaser-provider split arrangements. In particular, instead of contracting directly with individual physicians, a public insurance system might sign contracts with groups of physicians, indeed, often with managed care organizations. This suggests that the function that is being contracted out from the public system is the management of physician services. Having a formal arm's-length contract between the public sector and the manager of physician services might be an effective way of improving the incentives of such a manager. For example, Dixit (1997) has shown that when a manager reports to multiple noncooperative principals with heterogeneous objectives, such as elected officials in public office, equilibrium incentives are low powered. Requiring an explicit contract could facilitate the cooperation of the principals, leading to higher-powered incentives being given to the manager.

Explicit arm's length contractual arrangements might also be a way of limiting the scope of a manager's activities. Tirole (1994) suggests the usefulness of limiting the objectives of public sector decisionmakers. Dewatripont, Jewitt, and Tirole (1999) formally elaborate a model of career concerns. Providing a manager with a well-defined mission makes it easier to induce effort. In Dixit's (1997) analysis, the narrowing of a manager's objectives is effected by reducing the number of competing principals to whom the manager answers.

Contractual incompleteness. An alternative literature examines issues of contracting out versus internal provision—that is, vertical integration—starting from the presumption that contracts are necessarily incomplete. Even if choices are observable by both parties to a contract, if they are not verifiable by a third party and if the contract is consequently unenforceable, then institutional arrangements can have sub-

stantive effects on incentives. In particular, ownership of productive assets can matter when explicit contracts are unavailable. Private contractors are those who own the assets they use to produce services (for example, hospitals); public servants do not have the implied control rights over asset use.

Hart, Shleifer, and Vishny (1997) present a model of service provision when quality and cost are noncontractible. If cost is noncontractible, then procurement contracts like those studied by Laffont and Tirole (1993) are not feasible and a fixed price contract must be used. By definition, public sector employees cannot retain ownership of any quality innovations they generate, but private sector providers can. Incentives for quality innovations are thus greater in the private sector. Incentives for cost reduction are also greater in the private sector, but cost control is associated with lower quality. Thus, the private sector will always (in the model) produce at lower cost but could produce higher or lower quality. When one of the ways of reducing costs is to actively select easy-to-treat patients ahead of expensive cases, the social aspects of quality can be severely affected by incentives to control costs.

Some might argue that innovations in medical care are very important and those in insurance administration are less so. This would argue in favor of private provision of physician services under the condition that active selection could be controlled adequately. However, in countries with large sections of the population uninsured against health needs that are susceptible to standard treatments, innovation in insurance delivery may have high social payoffs, in which case (regulated) private provision may then be favored.

Competition

By allowing consumers to exert discipline on providers, competition can strengthen incentives for quality and cost-reducing effort. Competition among suppliers should not necessarily be identified with private supply. Indeed, the government of the United Kingdom has attempted to induce competition among public providers by developing the so-called quasi-market (Le Grand 1991). Even when consumers do not face financial incentives to choose wisely between suppliers, consumers might still induce effort and quality provision if their choices affect the payoffs to providers. Thus, Halonen and Propper (1999) model the impact of competition on quality when a public sector payer pays providers on behalf of consumers who are free to choose their supplier. The essential feature of their model is that when providers' objectives are not coincident with consumers' (on average), allowing consumer choice can help realign providers' incentives. The benefits of competition are of course limited by the elasticity of demand.

Competition between public and private providers might also be beneficial. A common argument in favor of large purchasing groups is the monopsony power they can wield in negotiating supply contracts. However, as Propper and Green (1999) point out, there is no particular merit in such actions—market power is inefficient, whether

it is on the supply side or the demand side. They suggest that under such arrangements, staff will either be of poor quality (good staff will be driven from the market by low wages) or employment contracts will permit outside earnings with little or no monitoring, weakening incentives for performance of primary job tasks. Introducing competition from the private sector may thus lead to higher public sector wages and costs, but with a net welfare gain (Danzon 1992).

Introducing public provision into a private market may be beneficial if it serves the purpose of making a minimum quality standard credible. For example, Ronnen (1991) uses a model of vertical product differentiation to show that a minimum quality standard can raise the quality provided by all market participants and lower equilibrium hedonic prices (that is, prices adjusted for quality). By restricting product differentiation and intensifying ex post price competition, an appropriately chosen standard makes all consumers better off. In principle, such a standard could be imposed by the government without recourse to public provision. However, if quality is difficult to monitor and if lapses are costly to penalize, public provision of the standard quality at a minimal price could act as a substitute for direct monitoring. In general, the idea that public and private sector quality can act as strategic complements should be viewed with some caution. Standard equilibrium analysis suggests the need to anticipate potential crowding out of private sector supply by public sector provision (Hammer 1997). In the case of nondifferentiated goods, this is indeed appropriate and it would be expected that if the publicly provided quality level was too high, then private supply would dry up.

Institutional Evolution in Latin America

Over the past 20 years, several Latin American countries have embarked on wide-ranging reforms of their health insurance and delivery systems. Countries have moved away from integrated public provision of insurance and health care and toward more decentralized provision, sometimes incorporating private sector involvement, in pursuit of expanded coverage and more efficient delivery. Major health insurance reform, like health care itself, appears to be a luxury good; the poorer countries in the region have focused on more basic challenges in terms of primary care delivery. This section reviews the experiences of four countries that have adopted significant reforms—Colombia, Argentina, Brazil, and Chile. For a more complete survey of health systems in Latin America, see Bengoa and others (1998).

Colombia

The health sector reforms Colombia initiated in the early 1990s represent possibly the most ambitious policy interventions undertaken since the 1950s and 1960s,

when countries in the region implemented large-scale social security mechanisms. Before the reforms, Colombia had a centralized, budget-financed, poorly organized public health delivery system that consisted of two uncoordinated bodies: the social security institutions that provided subsidized health services to formal sector workers, and the Ministry of Health, which provided public health inputs and subsidized hospital care for those who did not use the social security system.

The general goal of the Colombian reforms was to ensure a basic level of coverage for all individuals that could be supplemented by those willing and able to pay more. This conforms with the role of subsidized health care as a redistributive instrument. At the same time, the reforms attempt to reduce supply inefficiencies by encouraging alternative provider payment systems and allowing consumer choice. Thus, to implement the equity objective of universal coverage, the country adopted such techniques as competition and contracting.

There has indeed been a marked increase in formal coverage of the population, particularly among lower-income groups. Figure 1 shows coverage rates by income quintile in 1993 and 1997 (Uribe, Londono, and Jaramillo 1999). Overall, the proportion of individuals with insurance doubled in this period, from 23.7 to 57.2 percent, with the largest proportionate gains among the poor.

Insurance coverage is allocated to consumers through two regimes that together approximate a simple two-level voucher system. Formal sector workers and their families receive an implicit voucher for insurance that covers a wide range of services.

Figure 1. Health Insurance in Colombia: Proportion of Population with Coverage

Others (essentially the poor) receive an implicit voucher for a less generous package of insurance. The first regime is referred to as the contributory regimen and the second as the subsidized regimen. On the financing side, participants in the contributory regimen are required to pay a 12 percent payroll tax to help finance health care. Participants in the subsidized regimen make a means-tested contribution (that may be zero in many cases) to support health insurance costs.

Participants in the contributory regimen can use their vouchers to buy insurance from Empresas Promotores de Salud (EPS), which are essentially private sector insurance companies. The EPS can cash in the voucher with the government (via the Fondo de Solidaridad y Garantía, FOSYGA) for a fixed amount that is adjusted for some of the risk attributes of the consumer. Participants in the subsidized regimen can use their implicit vouchers to purchase (less generous) insurance either from EPS or Empresas Solidarias de Salud (ESS). ESSs are medical care purchasing organizations that subnational governments must set up to facilitate the coverage of the self-employed and nonsalaried workers who may not be able to access EPS.

The implicit vouchers have fixed monetary values, so there is little effective price competition among EPS and ESS. Instead, the EPS compete on the basis of the level of insurance they provide, as determined by the copayment rates and the quality and range of services offered. Thus, the standard packages of services defined for participants in each regimen act as basic plans that can be supplemented by insurers to attract clients. This kind of arrangement encourages efficient provision of insurance because the insurer retains any efficiency gains.

However, if demand is not elastic in response to quality changes, incentives to control costs might outweigh incentives to improve or maintain quality. Such incentives could be particularly strong in the subsidized regimen whose participants have less access to alternative providers. Similarly, in an attempt to attract inexpensive clients, insurance providers might bundle a low-quality standard package with high-quality additional services. For example, La Forgia (1998:257) reports concern over "the practice of EPS s to integrate the [standard package] with complementary plans, thereby undermining competition for a homogeneous service plan."

On the supply side, EPS and ESS contract with hospital and physician groups, including private sector Instituciones Prestadoras de Servicios (IPS), and formerly public sector but now autonomous Empresas Sociales del Estado (ESE). The financial aspects of such contracts are less precisely regulated than the demand-side transactions between consumers and EPS/ESS, although the law attempts to encourage innovative payment methods to encourage provider effort and efficiency (for example, capitation and diagnosis-related group [DRG]–based payments).

One aspect of the reforms that has received considerable attention is the fact that medical care providers are paid on the basis of demand. That is, insurers contract with providers to supply services for the covered clients, based on expected use (in the case of capitated payments) or realized use (in the case of fee-for-service and DRG-based con-

tracts). In the past, when the government paid for services, payments were nearly always purely prospective, deriving from budgetary allocations to hospitals and provincial health ministries. Demand-side financing is meant to impose discipline on providers by making them suffer financial losses as patients switch in response to low quality.

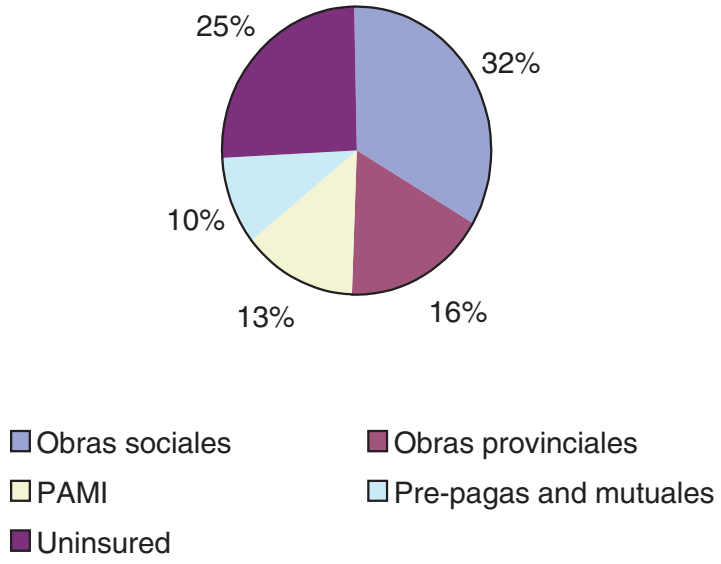
The formal separation of purchaser and provider is mixed in the Colombian system. On the one hand, under the proposed reforms (when fully implemented) the government will have little direct role in the provision of either health insurance or health care. The FOSYGA acts as a clearinghouse for taxes paid by individuals and transfers made to EPS and ESS. Apart from monitoring the quality of the insurance and medical services provided, the public sector will not actively perform any insurance purchasing role, this function being delegated to consumers. On the other hand, the degree of integration of the delivery of insurance and medical care varies widely. Some purchasers (EPS and ESS) contract at arm's length with provider networks (IPS and ESE), whereas others effectively own such networks along the lines of health maintenance organizations. Even if an EPS owns or has close contacts with a particular provider network, it is required by law to offer the services of at least one other IPS to consumers to increase ex post quality competition among providers.

Argentina

Argentina's formal health insurance system was well developed in the late 1980s. All employees were obliged to be insured by the so-called *obra social* that covered the sector in which they worked, effectively prohibiting formal sector workers from choosing their health insurer. In essence, the obras sociales were and remain nonprofit insurance companies owned by the relevant labor union. There are about 360 such obras, covering about 10 million individuals and their families. In addition, each of the 24 provinces of the country operates an *obra provincial*, covering about 5 million public sector employees and their dependents. Obras are funded on the basis of compulsory payroll taxes.

Retired workers and pensioners—about 4 million individuals—received health insurance coverage through the Integrated Program of Medical Care (Programa de Asistencia Médica Integral; PAMI), operated by the National Social Service Institute for Retirees and Pensioners (Instituto Nacional de Servicios Sociales para Jubilados y Pensionados). These services were funded by payroll taxes and taxes on pension benefits. The obras and PAMI combined covered about 61 percent of the population. Another 2 million people were covered by private, for-profit, prepaid insurance plans (*pre-pagas*) and another 1 million people received insurance through small insurers known as *mutuales*, of which there were around 1,000. Figure 2 shows the distribution of coverage across types of insurance. The 25 percent of the population who

Figure 2. Health Insurance in Argentina: Types of Coverage



lacked formal insurance would typically seek care through public hospitals operated by provincial and municipal governments.

The main focus of recent reforms has been on the insurance market and less on the organization of and payment for medical care. Within the insurance market, the focus has been on improving the efficiency of coverage, as opposed to extending formal coverage to the uninsured. However, over the long term, insurance reform aims to attain universal coverage through competitive provision of at least a minimum level of insurance. This focus on production efficiency derives from the belief that lack of consumer choice of obra, coupled with a weak regulatory framework, has led to poor quality coverage, financial instability, and political cronyism.

The existing fragmented structure—consisting of a public system for pensioners and retired individuals, a noncompetitive but decentralized system of obligatory insurance for formal sector workers, an unregulated competitive system for others able to pay, and a public hospital system providing insurance through the provision of low-quality services—is to be unified across consumers. That is, the characteristics of insurance providers and the environment in which they operate are to be independent of the identities of the individuals they cover. This represents a rational separation of the organization of production (determined by internal efficiency considerations) and the allocation of consumption (determined by allocative efficiency and equity concerns). The major incentive instruments are to be consumer choice and, where that is ineffective or imperfect, regulation of quality and financial soundness.

Competition among obras has been introduced; by mid-1999, most people were aware that they had a choice of insurer. Consolidation in the industry is clearly required and has been partially achieved through mergers of obras. (The number of registered obras fell from 360 in 1997 to 294 in 1999.) Insurers are required to offer a standard health benefits package (Programa Medico Obligatorio, PMO). In addition to representing a minimum level of insurance that may facilitate redistribution in general, the PMO has enabled consumers to make relatively easy comparisons of *obras*. However, formal coverage for the poor is not automatic, and ensuring the quality of services offered to those with low incomes may be difficult under the PMO. This is especially true because the effective price paid for coverage is 90 percent of the 8 percent payroll tax (the other 10 percent goes into a reinsurance/redistribution fund), so vertical segmentation of the market seems likely to occur.

So far, competition between obras and pre-pagas is limited. Individuals who are eligible for coverage by an obra are not permitted to obtain formal insurance from a pre-paga. However, some schemes have developed whereby an obra will subcontract with a pre-paga, thus allowing an individual to remain formally in the obra sector while effectively receiving insurance from outside.

In summary, Argentina's health insurance reforms have focused primarily on improving the efficiency of insurance delivery, mainly by increasing the role of competition among insurance providers. There has been relatively little in the way of either provider payment reform or the extension of coverage to marginalized groups.

Brazil

Health insurance in Brazil is something of a mix between a nominally comprehensive public system and a large and active private system. Unlike Argentina, Chile, and Colombia, which have tried various ways to implement privately provided mandatory insurance coverage, Brazil has opted to provide universal public insurance while encouraging use of the private sector as an alternative. Consumers have the freedom to choose among private plans and whether to use the public system. The big difference is that in opting out of the public system, individuals do not take their financing with them, so consumer choice provides little incentive for the public system to maintain quality. In reality, the public system acts as a floor, available to all but used primarily by individuals with low income.

Government intervention in the health insurance market through direct provision (of insurance) is motivated on distributional grounds, and the reforms have addressed the efficiency with which such public insurance is provided. In particular, the health sector reforms have concentrated on the organization of public service delivery, particularly through decentralization, and the public system's payment of providers. Until recently, relatively less attention had been paid to the regulation of private insurance providers.

Until 1993, public insurance was implemented through Instituto Nacional de Assistência Medicae Previdência Social (INAMPS), the medical arm of social security. INAMPS originally covered only formal sector workers, but under the new constitution of 1988 and subsequent legislation, coverage was nominally extended to the whole population. This insurance has been provided (at times inadequately) through a mix of subsidized public hospital care and reimbursement of privately provided care.

A comprehensive reform of the health system was instigated in the early 1980s. The World Bank (1994) provides a full review of the history of the reforms. These reforms were organizational in nature, relating to the coordination of INAMPS with the Ministry of Health, the decentralization of INAMPS functions to states and their partial recentralization, and finally the abolition and integration of INAMPS into the Ministry of Health under the umbrella of the Secretaria de Ações de Saúde (SAS). The main function of the SAS is to transfer funds to state health secretariats.

INAMPS contracts with private sector providers were first on a fee-for-service basis but later used a U.S. Medicare–type prospective payment system. There are currently two prospective payment systems in operation, for outpatient and inpatient services, respectively, although the cost control attributes of prospective payment have been ineffective largely because of a lack of monitoring and evaluation by the public payer (World Bank 1994).

The payment of medical providers and hospitals on the basis of utilization represents a limited version of contracting out. This reimbursement mechanism does not represent the contracting out of the management of individuals' health care needs in any meaningful sense. Nor does it represent the contracting out of insurance. Thus, although the private sector is heavily involved in the delivery of services financed by public insurance, providers have relatively weak incentives to focus on health outcomes.

Private insurance covered about 25 percent of the population in the mid-1990s. A number of factors have brought about the expansion in private coverage over the past 30 years, including growing incomes (in the 1970s), a tax deduction for out-of-pocket expenditures and premiums, and the deteriorating quality of the public system.

Private insurance is provided through four alternative types of organizations. The largest and historically most important is the prepaid group practice, which is similar to the health maintenance organization model in the United States, and had about 47 percent of the private insurance market in 1991. Medical cooperatives, which contract with preferred providers, captured 28 percent of the market in 1991. Large employers (20 percent of the market) at times self-insure and offer company health plans, sometimes contracting out the administrative functions to financial intermediaries. Finally, only a very small proportion of those covered by private insurance (4 percent) enrolls in indemnity plans (that is, reimbursement insurance).

Regulation of the private insurance market was virtually nonexistent until 1998. Exclusions and restrictions are common, financial soundness is unchecked, and fraudulent practices are perceived to be prevalent. In fact, the poor reputation of prepaid group

practices has been the main factor contributing to the relative growth of medical cooperatives and company health plans over the past 10 years, although prepaid group practices still capture the largest portion of the market. Lately, however, a number of consumer protection and financial regulation initiatives have arisen.

Chile

Chile's health system is one of the most closely and thoroughly studied in Latin America (Bitran 1998; Sapelli 1999). The country undertook wide-ranging and innovative reforms of its health and social security systems starting in the early 1980s, partly in response to failures of the bureaucratic centralized regimes that had prevailed previously. Similar to the arrangements in Argentina, the reformed Chilean system of compulsory health insurance pairs private provision of insurance for some (in the hope of improving the efficiency of risk sharing) with public insurance for others (to satisfy an equity objective). Funding is primarily through a proportional payroll and pensions tax, although there is no equivalent of Argentina's redistribution fund. Colombia's reforms have been more ambitious, more fully implementing a redistributive allocation mechanism while privatizing or at least corporatizing insurance provision to a greater degree. The pattern of insurance coverage by income and risk category that has resulted has been criticized by some commentators. However, it may be possible to argue that this pattern, though not first best, could be the best that can be achieved under certain assumptions about the redistributive capacity of the tax and transfer system.

Under the reformed mixed system with public and private insurance options, formal sector workers and pensioners are required to contribute 7 percent of their incomes (up to a cap) to finance health insurance. Each individual has the choice of allocating contributions to 1 of about 35 private insurance companies, known as Institucions de Salud Previsional (ISAPRES), or to the Fundo Nacional de Salud (FONASA, National Health Fund). The designated recipient of the funds then provides insurance coverage for the individual and his or her dependents. Individuals who are unemployed or who work in the informal sector are automatically covered by the public insurance system.

In 1995, ISAPRES covered about 31 percent of contributors and accounted for about half of insured medical care spending. ISAPRES can offer multiple policies and are free to charge corresponding premiums. These premiums can vary on the basis of age, gender, and the number of insured and on the quality and extent of insurance. (ISAPRES cannot discontinue insurance and can impose at most an 18-month waiting period on insureds for preexisting conditions.) Individuals are permitted to increase their contributions above 7 percent of income to purchase a higher-cost policy. In 1995, ISAPRES offered close to 9,000 policies, reflecting a near continuum of vertically differentiated insurance products matching the distribution of wages.

One important characteristic of contracts offered by ISAPRES is that they often include stop-loss components, limiting the financial risk of the insurer to a certain amount (above which the individual receives no reimbursement). This feature limits the extent of insurance actually offered and means that the high-risk clients—especially the elderly—choose not to participate. Table 1 reports the shares of each age group enrolled in FONASA and the ISAPRES.

Of course, those with low incomes also tend to choose not to participate in the ISAPRE system because the premiums are unaffordable and because the public system provides free insurance. Figure 3 confirms this pattern of demand, although it has changed over time. FONASA classifies beneficiaries into four income groups, labeled A (the poorest) through D (the richest). (It also has a fifth classification, E, for nonbeneficiaries, that is, those enrolled with an ISAPRE or not formally registered with FONASA.) In 1994, half of FONASA's beneficiaries came from the lowest income group, 25 percent from the next group, and around 12–13 percent from each of the two richer groups, C and D. In 1996, this picture started to change, with individuals from the poorest group representing just one-third of FONASA enrollees, whereas the share of group D enrollees doubled to about 25 percent. The shares of groups B and C did not conform with this convergent tendency.

This general pattern of coverage—in which those with high risks and low incomes use the public system and others use the ISAPRES—is fragmentary, although this criticism does implicitly assume that uniform coverage is optimal. However, in a second-best world in which the government wishes to redistribute from the rich to the poor and from those with low risk to those with high risk, such a pattern may not be unreasonable. What is perhaps questionable is the extent to which higher-income individuals are effectively required to purchase superfluous insurance or at least insurance of low marginal value. This feature tends to exacerbate incentives to select low-risk/high-income consumers.

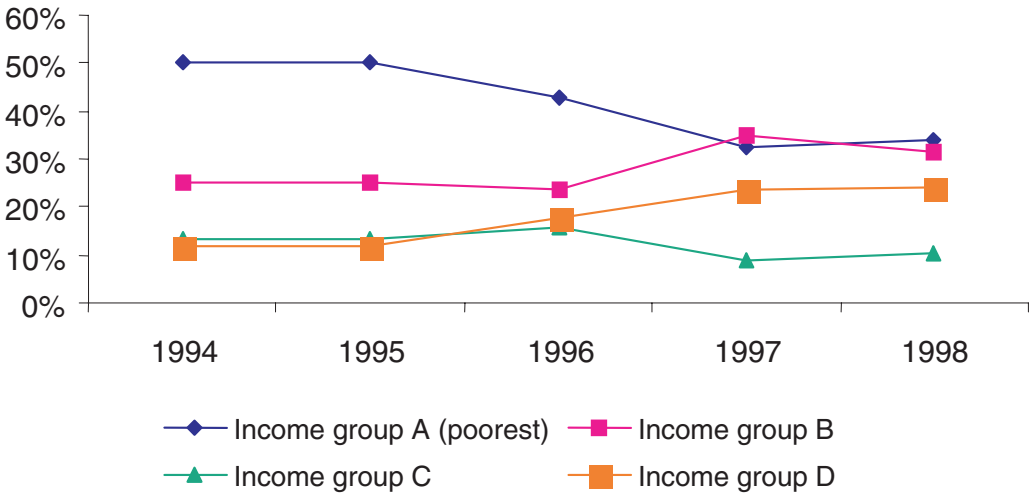
A comparison with Colombia's more focused system is useful in this respect. Under current practice, Colombian users of the contributory regimen (corresponding to Chilean ISAPRES) receive a more or less standard insurance package independent of income, implying an in-kind redistribution from high-income contributors to lower-

Table 1. Chilean Health Insurance: Distribution of Coverage by Age

	Age group (years)						
Insurance	*0–1*	*2–14*	*15–24*	*25–54*	*55–64*	*65+*	*Total*
FONASA	65.8	64.7	58.3	57.0	68.3	79.9	61.8
ISAPRES	24.9	23.9	22.4	26.7	16.5	6.9	23.1
Other	9.3	11.4	19.3	16.3	15.2	13.2	15.1
Total	100	100	100	100	100	100	100

Source: Uribe, Londono, and Jaramillo (1999).

Figure 3. Health Insurance in Chile: Distribution of FONASA by Income



income contributors, which results in two tiers of more or less uniform health insurance. In the ISAPRE system, however, above the public level of insurance there is a continuum of insurance qualities that increases with income. The Colombian arrangement therefore allows for some redistribution within the group of relatively higher-income individuals. Perhaps more important, because the average value of the implicit voucher used in the ISAPRE system is equal to the average contribution across all ISAPRE users, there is limited redistribution (through the health system at least) between the two groups in Chile. In contrast, because the cost of the standard insurance package under the Colombian contributory regimen need not (in fact, does not) equal the average contribution by users, there is scope for further intergroup redistribution.

Of course, to make definitive statements about the extent of redistribution among groups requires knowing the full structure not only of taxes but also of other government expenditures. Focus on the earmarked taxes and the provision of insurance is useful for predicting the effects on distribution of marginal parameter changes. For example, an increase in the payroll tax rate in Colombia would increase the resources available for both the low-quality and high-quality insurance packages. Doing the same in Chile would necessarily increase the quality of the high-quality packages, with probably little effect on that of the publicly provided services. However, Bitran (1998) finds that within the FONASA-financed public insurance, the incidence of net benefits is reasonably progressive, suggesting a degree of within-group redistribution through the public system.

A final characteristic of insurance contracts generated under the ISAPRE system is that because they are tied closely to current wages, quality tends to follow the life-

cycle pattern of wages, which may be somewhat different from the time profile of an individual's demand for insurance. It is not just the case that some individuals with high lifetime earnings will be induced to purchase more insurance over their life spans than they would desire, but that the pattern of coverage may not match their pattern of needs. Even if capital markets work well, this problem will persist unless insurance companies can write long-term contracts in which high contributions at ages of high earnings but relatively low risk are made in exchange for lower contributions later in life when earnings are lower and risks higher.

In terms of the organization of medical care, about 70 percent of Chile's population is covered by the public insurance system, which finances care delivered mainly through public hospitals and a mix of public and private ambulatory care. Medical services financed through the public budget are funded primarily from FONASA and the general budget (for the indigent), with additional resources deriving from copayments by public patients, payments from ISAPRES that use public facilities, and other sources. FONASA acts primarily as a decentralized financing agency, collecting contributions and distributing funds to providers through a network of 26 health services. Following a contraction in public health spending in the 1980s (reflecting in part the growth of ISAPRES during that period), real public health expenditures more than doubled between 1990 and 1996. Despite this increase, the perceived quality and adequacy of public services remained stagnant, leading to a recent debate about reform of the internal organization of the public system. Some have argued in favor of moving toward internal markets and introducing competitive pressures into the delivery system, and others—particularly some labor unions and parts of the medical profession—have resisted what they see as a move toward privatization.

Although a decentralized organizational infrastructure exists in the form of the 26 health services, central bureaucratic control of some crucial decisions remains in the hands of the central authorities, including the Ministry of Finance. In particular, labor inputs and compensation are dictated from the center and funded directly from the budget. Some central control of staff allocation is likely to be necessary in the health system, especially one in which providers are not necessarily profit maximizers and in which service provision has a redistributive role. However, centrally made allocations tend to be unresponsive to changing cost structures and needs and provide little incentive for innovation.

One part of the financial apparatus that does provide incentives for cost consciousness is the use of a prospective payment system for financing the use of drugs and material supplies. Less common services are funded on a reimbursement basis from a global budget under a separate mechanism. A movement toward full prospective funding could also generate a degree of competition similar to that envisioned in the quasi-market reforms of, for example, the United Kingdom. Whether this competition is socially beneficial depends, as usual, on the responsiveness of consumer demand to quality, as determined by both geographical constraints and limitations on

information. When it is not socially beneficial, which is especially likely in poor and/or rural areas, direct monitoring and regulation of quality are necessary.

Conclusions

Despite the well-known failures of insurance and health care markets associated with imperfect information, the primary motivation for large-scale public intervention in the sector has been equity. Most often this derives implicitly from a concern for good-specific equity, but it can also be justified as part of a more general second-best redistributive mechanism. Within the context of public intervention in the pursuit of equity goals, it is reasonable to assert that the reforms in Latin America of the past two decades have sought not so much to improve the efficiency of private markets but to improve the efficiency of public provision, either through direct use or mimicking of such markets. This has sometimes been achieved by altering the focus and function of preexisting institutions—for example, the obras sociales in Argentina—or by encouraging the growth of new institutions, such as the ISAPRES in Chile.

Coupled with the reforms of the ways insurance and care are organized and delivered, countries have attempted to various degrees to extend formal coverage to previously marginalized groups and to finance this extension fairly. Colombia can be seen as instituting an implicit two-tier voucher scheme, financed through a proportional wage tax. Chile's system has a similar financing mechanism, but the distribution of benefits is less progressive, so that the net effect is in principle less redistributive. Argentina's remodeled obras system is something of a halfway house: the financing base is similar, but the distribution of benefits in terms of the quality of insurance increases with income, although there is some implicit redistribution from richer to poorer obras. On the face of it, Brazil's health insurance system serves less of a redistributive function than those of the other countries, to the extent that there is no earmarked tax dedicated to financing health insurance. However, this highlights the limitations of examining the health sector independently of the general tax and transfer system. The taxes paid by higher-income persons in Brazil are not reduced when individuals opt for private insurance. An important issue, which I do not address in this article, would be to analyze the extent of redistribution generated by the general tax base.

Note

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Caribbean. The author thanks the following individuals for discussions about the article: Girindre Beeharry, Chico Ferreira, Charlie Griffin, Jeff Hammer, Jeni Klugman, Jerry LaForgia, Maureen Lewis, Andre Medici, and Miryan Sato.

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