

MEDICAL CARE UNDER SOCIAL INSURANCE IN LATIN AMERICA*

Dieter K. Zschock

State University of New York at Stony Brook

Social insurance entitlements represent one of the more controversial aspects of social sector development in Latin America.¹ The most comprehensive critique of social security views the system's coverage and organization as a reflection of the region's social stratification (Mesa-Lago 1978). According to this view, power groups in public administration, private industry, and labor unions exercise control over the organization and financing of sickness, invalidity, and pension funds, and they seek to restrict benefits to their respective memberships. The noninsured lack market power and political organization because of their low levels of human resources development and lack of social cohesion. Mesa-Lago's critique may be more justified for the lower-income than for the higher-income countries in Latin America, however, at least regarding medical care, which is the system's largest single entitlement program in most Latin American countries.

Although this article will not take issue with the major thrust of Mesa-Lago's thesis, it will nevertheless offer a more optimistic view of medical care under social insurance that is closer to previous reviews by Wolfe (1968) and Roemer (1973). Specifically, this article will make important distinctions among sixteen countries by relating their medical coverage first to their respective levels of development as measured by GDP (gross domestic product) per capita and then to each program's organizational and financial characteristics. Seven relatively high-income countries among the sixteen—Argentina, Brazil, Costa Rica, Mexico, Panama, Uruguay, and Venezuela—offer medical care coverage to an average of 71 percent of the total population. In contrast, nine lower-income countries—Bolivia, Colombia, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Paraguay, and Peru—pro-

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vide on average only 11 percent of their inhabitants with medical care under social insurance (Palermo, Millor, and Elizondo 1981; PAHO 1981).

COVERAGE

Medical care under social insurance has existed in Latin America for over sixty years, and in some countries, it preceded the introduction of public health services (Wolfe 1968; Roemer 1973). Except for Chile, Cuba, Haiti, and Nicaragua (which do not currently use this approach), the other sixteen Latin American countries mentioned above all have "mixed" health care systems that include public insurance, social insurance, and private services. These sixteen countries account for over 90 percent of the Latin American population. Over half of their inhabitants are covered by medical care under social insurance, a fact that calls into question Mesa-Lago's assertion that social insurance coverage is a privilege of a minority of the region's population.

Predominantly Urban Aspects of Coverage

The rationale for social insurance is that employers and employees jointly benefit from protecting the health of workers and that they should share the risk of illness by pooling their contributions into an insurance fund. This rationale can logically be expanded to include the dependents of workers, albeit at a higher level of contributions. The rationale also allows for the expansion of coverage to additional employers and their employees, but only if the marginal cost of their protection does not increase the average cost of protection for those already covered. This caveat explains why social insurance coverage generally focuses on the urban population. The caveat also explains why it is difficult to expand coverage to segments of the labor force with lower wages (who would therefore make lower social insurance contributions) and to the medically indigent population in urban slums and rural areas.

Medical care coverage under social insurance (or any other health services system) involves at least two dimensions, namely the proportion of the population protected and the health risks against which coverage is provided. Recent estimates of population coverage are shown in table 1. Information available on health risk coverage shows that entitlements typically include a wide range of ambulatory medical and dental care and hospital services (U.S. Social Security Administration 1982) but that these benefits vary significantly among and within countries. The most important variant is the extent to which

family members receive equal or lesser benefits than the employed worker.

In five of the seven relatively high-income countries, spouses and children of covered workers have equal rights to medical care. The exceptions are Uruguay, which provides only maternity and pediatric

TABLE 1 *GNP Per Capita and Population Coverage for Medical Care under Social Insurance in Sixteen Countries, 1976–1980*

	GNP per Capita (1977 US\$)	Year	Population (millions)		Percentage Covered
			Total	Covered	
Seven relatively high-income countries					
Argentina	1,730	1980	27.1	21.7	80
Brazil	1,360	1978	115.4	95.8	83
Costa Rica	1,240	1977	2.1	1.7	82
Mexico	1,120	1980	71.9	40.3	56
Panama	1,220	1979	1.9	0.9	47
Uruguay	1,430	1979	2.9	1.4	50
Venezuela	2,660	1978	13.1	4.0	30
Subtotals			234.4	165.8	71
Nine relatively low-income countries					
Bolivia	630	1978	5.3	1.4	26
Colombia	720	1978	25.6	2.6	10
Dominican Republic	840	1977	5.0	0.2	4
Ecuador	790	1979	8.1	0.4	5
El Salvador	550	1978	4.4	0.2	5
Guatemala	790	1976	6.4	0.9	14
Honduras	410	1977	3.3	0.2	7
Paraguay	730	1980	3.1	0.4	13
Peru	840	1979	17.3	2.0	12
Subtotals			78.5	8.3	11
Totals for all 16 countries			312.9	174.1	82

Sources: GNP per capita data from World Bank, *World Development Report, 1979* (New York: Oxford University Press, 1979), table 1, p. 126. Population and coverage data from Pan American Health Organization, "Coordination of Social Security and Public Health Institutions," provisional agenda item 23, table 1, 13 Aug. 1981 meeting of the PAHO Directing Council. The authors of this document compiled their table (from which the above table was abstracted) from Olga Palmero, Manuel Millor, and Margarita Elizondo, *Financiamiento y extensión de la seguridad social en América Latina* (Mexico City: Instituto Mexicano del Seguro Social, 1981). Palmero, Millor, and Elizondo extracted the data from original reports of social insurance institutions of the respective countries shown.

care, and Panama, which provides ambulatory care but (with limited exceptions) no hospital care for dependents. Among the nine lower-income countries, five provide only maternity and pediatric care (the Dominican Republic, Ecuador, El Salvador, Honduras, and Peru). Colombia's Instituto de Seguros Sociales (ISS) has two funds for private sector workers. One provides the limited benefits for dependents just described and covers about 90 percent of the population covered by the institute. Another fund provides equal coverage for dependents but requires much higher rates of contribution; it applies to the remaining 10 percent of the institute's total coverage. The other three countries (Bolivia, Guatemala, and Paraguay) all provide equal benefits for dependents.

The estimates of coverage shown in table 1 refer to nominal, rather than to real, protection; they do not distinguish among different plans and include dependents with equal rights as well as dependents with lesser entitlements than employees. Moreover, these data do not distinguish between urban and rural coverage. With the risks covered also differing among countries, the comparability of coverage data is therefore very limited. Nevertheless, table 1 broadly supports the distinction being made in this article between the relatively extensive medical coverage under social insurance provided in the seven relatively high-income countries (about three-fourths of the sixteen countries' total population) compared to the limited coverage provided in the nine lower-income countries (one-fourth of the combined population).

One can infer from these estimates that in the first group of countries, most of the urban population is covered, but that in the latter group, only about one-third of the urban population is covered. Social insurance lends itself more easily to urban coverage than to rural coverage because of higher wage levels and the more formal work relationship between employers and employees. Even in the urban areas, however, social insurance coverage is more easily provided for employees of large modern enterprises than for employees of smaller firms, the self-employed, domestic servants, and itinerant workers. Contributions and benefits are far more difficult to administer for these marginal segments of the urban labor force, and their lower wage levels make it inefficient to include marginal segments. The more extensive coverage of the population in the higher-income countries thus reflects their greater urbanization and more stable employment conditions.

Protection of the Rural Population

Inclusion of the rural population in social insurance coverage, with priority assigned to medical care, has been a long-standing policy

objective in Latin America (Mallet 1980). As of 1977, however, only Brazil and Mexico among the relatively high-income countries had made demonstrable progress in this area. Costa Rica, Panama, and Venezuela provided no medical coverage under social insurance for their rural population in 1977. No information is available on rural coverage in Argentina and Uruguay, but it probably is also very limited. Among the relatively low-income countries, only Ecuador has made a commitment to providing its rural population with social insurance coverage, although the program so far reaches only a small proportion. None of the other countries in this group shows much progress in providing medical care under social insurance in rural areas. The obstacles to expanding rural coverage include the much lower income levels, greater geographical dispersion, less formal employment conditions, more extensive self-employment conditions, and the seasonal unemployment that is prevalent in the rural areas. These problems increase the per capita cost of providing medical care for the rural population and hinder its administration.

Mexico probably provides the most extensive coverage for rural workers of all Latin American countries. If one includes the population served by Coplamar, the country's integrated rural development program, total rural coverage exceeds ten million, or about one-third of the rural population (IMSS 1981). Medical care assumes a high priority in Coplamar and is provided in small clinics staffed by auxiliary nurses. Although this coverage is administered by the Instituto Mexicano del Seguro Social (IMSS), it is financed entirely from general tax revenues. Coverage by IMSS for other rural workers not served by Coplamar is financed partially through transfers from urban assessments and partially from ad valorem taxes on output for workers in monocrop production (such as sugar and sisal) or from land taxes levied on small-holders.

In Brazil rural coverage of medical care under social insurance is also relatively extensive, although quantitative estimates are not available (Brazil 1980; McGreevey 1982). In this case, the rural program is administered by the unified Instituto Nacional de Assistência Médica da Previdência Social (INAMPS). The nature of rural assessments, however, remains different from that of wage-based urban contributions. In addition to being financed by a levy on urban employer wage bills, rural benefits are financed by a tax on the market value of all agricultural and livestock products sold by farmers. Rural employers also are charged a small percentage of their previous year's production and of the value of fallow acreage to help support the medical care program. The Brazilian program involves extensive use of mobile units in delivering health care services to rural beneficiaries.

In Ecuador the rural social insurance program is operated by the

country's national social insurance institute (Annis 1979), as in Mexico and Brazil. The extent of coverage of the rural population in Ecuador is only about 3 percent; however, the rural component represents about one-fifth of the institute's total number of beneficiaries. The parent organization provides 97 percent of budgetary support. This financing pays for most of the operating cost and provides materials for health clinic construction and equipment. Twenty thousand participating families pay monthly contributions estimated at about 3 percent of family cash incomes. Communal labor is used to construct and maintain health clinics, which are staffed by an auxiliary nurse and visited regularly by a medical doctor. Complete hospitalization benefits are included in the coverage. The major problems encountered by the program (aside from bureaucratic and logistical obstacles) are participants evading their monetary contributions and the clinics' preoccupation with curative medical services, instead of the preventive and environmental health care required by the major health hazards.

The problems inherent in financing rural coverage through wage-based contributions are clear. The three countries that have made some progress under social insurance all have financed rural coverage largely by general tax revenues, rather than by wage-based assessments. One could reasonably argue the advantages of household monetary contributions as a mechanism of self-help and community participation, but the admittedly scarce information available suggests that this mechanism has not been readily accepted in the rural areas of Latin America. Contributions in kind of labor and materials are more common, but they tend to be made in anticipation of engendering high-level commitments for providing recurrent cost financing from general tax revenues.

Major constraints on the expansion of coverage in the lower-income countries include their relatively small urban populations and relatively low levels of average wages. At the same time, the medical care programs provided under social insurance in the lower-income countries have increased demand by providing services of low direct cost to beneficiaries and by bowing to pressures from doctors for the intensification of coverage. The notion that coverage entitles one to unlimited access to medical care under social insurance abounds in Latin America, but unless this increased demand can be controlled by limiting utilization in accordance with well-defined criteria and priorities, coverage cannot be rapidly expanded.

ORGANIZATION

In all but two of the sixteen Latin American countries reviewed here, social insurance programs operate semiautonomously under the

auspices of the labor ministries. The exceptions are Brazil, where such programs are organized under a separate ministry of social insurance and social assistance, and Peru, whose social insurance institute is attached to the ministry of health. This section will review the medical care delivery mechanisms under social insurance in Latin America and their coordination with public health services, two organizational aspects that show some relationship to GDP per capita.

Types of Organizational Arrangements

The distinction between the direct and indirect provision of medical care has become a generally accepted means of classification (Roemer 1973). Under the direct pattern, a social insurance fund operates medical care facilities itself and employs medical personnel. Under the indirect pattern, the fund merely finances and regulates purchases of medical services from public or private facilities and practitioners.

Social insurance authorities in Latin America typically claim that they were compelled to introduce the direct pattern whenever public or private medical services were either nonexistent or inadequate to provide care for a fund's beneficiaries (Roemer and Maeda 1976). Other determinants said to favor the direct pattern have been the reluctance of beneficiaries to use public health services along with lower-income patients who use them free of charge and the influence of doctors (particularly when represented on the boards of social insurance funds) who wanted more modern facilities and equipment as they saw their profession increase rapidly in size (Frank 1982).

While this characterization has some validity, it fails to take into account the complexity of organizational arrangements in most of the countries, nor does it clearly reflect the advantages and disadvantages of both the direct and indirect patterns. Many countries have multiple social insurance funds, including large, separate funds for private and public sector employees. In addition, both sectors tend to have smaller funds for particular segments of the labor force, such as miners and communications workers. The large funds usually have developed a direct medical care approach, but never exclusively so because they also use the indirect approach to serve beneficiaries who live beyond access to their own services. Some of the small funds also operate medical centers, but more typically they use the indirect pattern.

Under the indirect pattern, social insurance funds in Brazil and Argentina sometimes contract with labor unions, which assume responsibility for providing medical care for their members either under contractual arrangements with providers or on a free-choice, reimbursable basis. Although no data are available to show the proportions of beneficiaries served by the direct and indirect approaches, the latter

may account for as much as half or more of all medical coverage under social insurance in the region. The following country summaries will illustrate the variety of organizational arrangements described above (Roemer 1973; Zschock 1979, 1980; ISSA 1982).

The Brazilian social insurance system has undergone a remarkable evolution since its inception sixty years ago. During its first decade, many separate social insurance funds were created, most of which included medical care among their benefits. Over the next three decades, legally mandated amalgamation gradually reduced this number to seven large funds representing major occupational groups, including rural workers. In 1977 the entire system—including its rural component—was unified into what is now known as INAMPS (as described above). INAMPS provides some medical care directly in the major urban areas, but for most urban beneficiaries and the rest of the country, it relies on the indirect pattern, utilizing either public or private sector services. Arrangements include prepaid health maintenance organizations as well as reimbursement of beneficiaries' expenditures for private medical care.

In Argentina the medical services of the country's many social insurance funds operate under the authority of a national institute of social services, which issues a uniform list of approved medical services and prices. In Uruguay a directorate of sickness insurance in the ministry of labor and social security nominally administers medical care provisions of the country's many mutual aid societies. In both countries, however, social insurance programs must make individual arrangements with public or private sector providers of medical care. In both Buenos Aires and Montevideo, several funds provide medical care directly through their own facilities, but the indirect pattern predominates and appears to be the preferred approach.

Three other countries—Bolivia, Colombia, and Mexico—also use multiple social insurance funds. All provide medical care benefits, but without coordination and under less uniform organizational arrangements. In each of these three countries, two dominant funds exist, one for private sector workers and one for government employees. These large funds all provide medical care mostly under the direct pattern, although they also use the indirect pattern outside the major urban concentrations of their beneficiaries. A number of smaller funds, which serve specific occupational groups in both the public and the private sectors, generally use the indirect approach but usually under contractual arrangements with specific public or private sector providers of medical care.

Ten other diverse countries—Paraguay, Peru, Ecuador, Venezuela, the Dominican Republic, Panama, Guatemala, Honduras, El Salvador, and Costa Rica—have only one national social insurance fund pro-

viding medical care. Most use the direct pattern of service delivery, supplementing it to a limited extent with the indirect approach for beneficiaries living beyond access to the fund's medical facilities. Peru is unique in allowing workers to choose between using the institute's facilities or selecting private care on a cost-reimbursable basis.

Based on their years of experience with both the direct and indirect patterns of medical care under social insurance in these sixteen countries and elsewhere, social insurance experts have identified the advantages and disadvantages of both approaches (ISSA 1982). Advantages of the direct pattern are said to be the higher and more uniform quality of medical care achievable as well as its greater potential for including preventive health care among its services. Although it may be more costly than the indirect approach, the direct approach reportedly lends itself more readily to cost control. The disadvantages associated with the direct pattern are its tendencies toward utilizing capital-intensive medical technology, depersonalizing of patient care, and becoming organizationally rigid. Moreover, its potential for cost control and preventive health care seem rarely realized. None of these observations, however, has yet been analytically substantiated.

The indirect pattern's advantages supposedly include its greater flexibility, lower cost, closer doctor-patient relationships, and the relative ease of expanding its population coverage. Its disadvantages are said to include unreliability in the supply of public and private medical care, difficulty in controlling the quality of care, and misuse by doctors and patients of payment procedures. Again, none of these observations is supported by systematic analysis.

The fact that claims of respective advantages and disadvantages of the two approaches are largely contradictory suggests that no general consensus exists on their relative merits. One could reasonably argue that either system can be made to work efficiently if medical care objectives are clearly specified and the system is effectively administered so as to assure uniform standards of care at affordable unit costs. The use of both approaches by a social insurance fund seems to give the system flexibility under varied conditions of beneficiary concentrations, medical care needs, and availability of medical facilities and personnel. No clear distinction exists between the relatively high-income and low-income countries in their organizational preferences, although the indirect pattern is used predominantly in only three of the seven higher-income countries, while the direct pattern predominates in the other four countries in this group and in all nine of the lower-income countries.

Coordination with Public Health Services

The sixteen Latin American countries reviewed here all use varying combinations of public health and social insurance approaches for the financing and delivery of medical care, including the use of private providers under the indirect pattern. Although the development of these health care systems has not been well coordinated among the major components, international efforts at coordination within the social insurance sector and between public health and social insurance date back to 1959 (PAHO 1977). Comparisons among countries reveal three different patterns of social insurance and public health care interaction that have emerged over the last two decades. The first two patterns include the seven relatively high-income countries, while the third includes the nine relatively low-income countries.

The first pattern is demonstrated in Argentina and Uruguay. In both countries, social insurance is the major source of medical care coverage, supplemented by private insurance, copayments for both types of insurance, and direct payments for those not covered at all. Social insurance, however, is offered through numerous funds that are only loosely coordinated at the national level. Public health plays a relatively minor role, being limited to the operation of hospitals with some proportion of their operating budgets financed from insurance and copayments.

The second pattern is seen in five countries (Brazil, Mexico, Venezuela, Costa Rica, and Panama) that provide extensive coverage for medical care under social insurance. In these countries, the relationship of social insurance to public health ranges from extensive cooperation to virtual integration. Public health plays an important role as well in providing either directly or through the social insurance system medical care for the indigent, in supporting hospitals jointly with the social insurance institutions, and in conducting national preventive health care programs.

The third pattern characterizes the nine lower-income countries (Bolivia, Colombia, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Paraguay, and Peru). Their pattern consists of the poorly coordinated coexistence of public health and medical care under social insurance. They also have in common the fact that social insurance covers only a small proportion of the population. Public health plays a dominant role in the operation of hospital services and in serving the medically indigent through primary health care programs, in both urban and rural areas.

International efforts to stimulate coordination began with a 1959 meeting of social security experts, organized by the OAS (PAHO 1977). Since then coordination has been an issue at a number of international

meetings with varying sponsorship and participation by public health and social insurance organizations. If a consensus has emerged, it seeks to coordinate the development of both approaches but to recognize that they serve different population segments. Activities in which cooperation has been mutually beneficial include constructing and utilizing hospitals as well as producing and distributing pharmaceuticals.

The nature of medical care coordination appears to be influenced by the extent of social insurance coverage. Once social insurance becomes the principal source of medical coverage for a majority of the population, public hospitals also come to rely on this source for much of their operating support. The terms of contractual agreements then determine the nature of coordination between the two subsectors. Jointly financed and operated health campaigns also are more common in countries with extensive coverage under social insurance. But as long as public health remains dominant in terms of coverage and financial support, as is the case generally in the group of nine lower-income countries, fewer contractual arrangements are made for the joint use of some facilities, and cooperation in specific program areas remains infrequent. In these nine countries, medical care under social insurance remains a privilege for small segments of the labor force, while the medically indigent population depends largely on public health services.

In 1977 Latin American ministers of health concluded that because of institutional rigidities and financial inaccessibility, compounded by significant increases in the cost of medical care, universal coverage was far from being achieved (PAHO 1978). Without disputing that conclusion, one can observe that achievements have been very uneven among countries. Coordination has been greater in the higher-income countries than in the lower-income countries. The former have expanded coverage primarily through medical care under social insurance, while the latter have tried to expand the delivery of services primarily under public health auspices.

The main obstacles to achieving closer coordination in the lower-income countries undoubtedly include the prevalence of vested interests of beneficiaries in the maintenance of privileged access to medical care under social insurance and their preference for the direct pattern of medical care delivery, as well as the tendency of medical care under social insurance toward technology-intensive, doctor-centered medical care and its primarily curative orientation. Another basic obstacle that has stymied coordination is the fact that in most countries, public health services and medical care under social insurance are organized under different ministries and subject to different laws. These obstacles have inhibited unification of standards and procedures in the health sector and thus the more rapid expansion of coverage.

FINANCING

This section will review the limited data available on social insurance revenues, expenditures, and the costs of medical care under social insurance. Important corrections have been made in the process of using primary statistical sources to avoid double-counting social insurance and general tax-revenue sources of financing.² Without such corrections, any financial analysis would overestimate revenues and expenditures in both areas.

Sources of Revenues

Social insurance is financed primarily by wage-based contributions levied on employers and employees. Benefits usually include old age and invalidity pensions, sickness and other temporary disability payments, survivor benefits and medical services for illness, and maternity and infant care. Contributions for all of these contingencies are borne in varying proportions by employers and employees. Transfers of general tax revenues are not major components of total social insurance receipts in the eleven countries shown in table 2. The data source for this table (ILO 1981b) shows no government contributions for social insurance in Argentina, Bolivia, the Dominican Republic, and El Salvador, and relatively small proportions for Costa Rica, Guatemala, and Panama. In Colombia the state contribution shown is largely accounted for by the state's contribution as employer to the public employees' fund, and in Venezuela the state pays for the social security institute's administrative costs. Employers contribute to total social insurance revenues roughly twice the amounts paid by employees. This ratio of receipts accords with nominal assessment rates shown in table 3.

In all these countries, contributions are subject to varying minimum and maximum limits of wages so that revenues are less than they would be if they were based on total wages. It also is likely that inefficiency and evasion cause actual collections to fall short of nominal rates. Social insurance authorities consider this problem a serious one, but they typically have no reliable data to substantiate their concern, nor do they have any effective means of enforcing payments. In order to overcome collection problems, a number of social insurance funds use a mechanism called *preinvoicing* (Arroba 1979). Because of the complexities of maintaining employment and payroll records on which they can agree, the social insurance fund and the employer agree instead on some base-year total of a wage bill for collection purposes; thereafter, the fund may bill the employer for additional contributions based on conservative estimates of growth in the base-year total in order to avoid disputes and delays in revenue collection. Preinvoicing thus may facil-

TABLE 2 Sources of Social Insurance Revenues in Ten Countries in 1977^a

	Wage Deduction (%)	Employer Contribution (%)	Government Contribution (%)	Capital Income (%)	Other Income (%)	Total (%)
Five relatively high-income countries						
Argentina	38.0	51.8		9.4	0.8	100.0
Costa Rica	25.7	48.5	2.1	6.4	17.3	100.0
Panama	29.5	53.2	4.1	8.8	4.4	100.0
Uruguay	28.6	47.5	7.0	1.4	15.5	100.0
Venezuela	23.9	47.8	15.3	12.0	1.0	100.0
Five relatively low-income countries						
Bolivia	32.3	53.9			13.8	100.0
Colombia	24.3	58.2	5.4	6.7	5.4	100.0
Dominican Republic	16.6	64.4		2.4	16.6	100.0
El Salvador	26.7	63.7		8.1	1.5	100.0
Guatemala	30.0	55.6	12.6		1.8	100.0

Sources: International Labour Office, *The Cost of Social Security: Tenth International Inquiry, 1975-1977, Basic Tables* (Geneva: ILO, 1981). Percentages calculated by the author. The survey shows revenue data only for the ten countries included in the table.

^aSources refer to private sector social insurance funds only.

tate the administration of collections, but probably at a level of contributions substantially below what is mandated by law.

A typical criticism of social insurance contributions is that their cost is borne by the consumer through higher product prices. This argument assumes that demand for the product is price inelastic and that the employer's cost is passed on to the consumer rather than being borne by the employee in the form of a lower wage. Some portion of the employer's share probably is passed on to the consumer through higher prices, but employers typically argue that legally mandated fringe benefits are excessively high and cause them to limit their employment expansion in favor of more capital-intensive production. On balance, no convincing evidence exists to prove that social insurance contributions are being shifted to the consumer (Musgrove 1983a).

No specific information is available on sources of investment financing for medical care under social insurance. Investments in medical care facilities generally are not paid for out of current revenue. Medical care insurance funds rarely set aside resources for investment purposes, including depreciation and net additions to plant and equipment. Many hospitals have been financed instead with reserves

TABLE 3 Assessments for Medical Care under Social Insurance in Sixteen Countries in 1977^a

	Wage Deduction (%)	Employer Contribution (%)	Government Contribution ^b (%)	Self-Employed Earnings (%)	Pensions (%)
Seven relatively high-income countries					
Argentina	3.00	4.50			3.00
Brazil ^{c,h}	8.00	8.00	deficits		
Costa Rica	4.00	6.75	0.25	9.00	
Mexico ^h	2.25	5.64	subsidy		
Panama ⁱ	1.00	8.00	subsidy		6.75
Uruguay ^c	5.00– 10.00	8.00– 10.00	deficits		
Venezuela	2.00	4.25– 6.25			
Nine relatively low-income countries					
Bolivia	2.00	8.00			2.00
Colombia	2.33 ^d 4.00 ^e	4.67 ^d 8.00 ^e	deficits		
Dominican Republic ^c	2.50	7.00	2.50 plus deficits		
Ecuador ^{c,h}	5.00	1.00			
El Salvador	2.50 ^f 2.23 ^g	6.25 ^f 5.57 ^g	subsidy		5.00
Guatemala	2.00	4.00	1.50		
Honduras ^c	2.50	5.00	2.50		
Paraguay	9.50	16.50	1.50		5.00
Peru ^c	2.50	5.00		7.50	

Source: U.S. Social Security Administration, *Social Security Programs throughout the World, 1981*, Research Report no. 58 (Washington, D.C.: SSA, 1982).

^aPercentages of wages, earnings, or pensions.

^bIn some countries, governments contribute only in case of deficits, while in others, they regularly contribute subsidies, as indicated. Blank spaces do not rule out the possibility that contributions may exist that are not shown in the source.

^cIn these seven countries, medical care and maternity benefit assessments are combined with assessments toward retirement pensions. Percentages show the combined assessments.

^dIncluding only maternity and pediatric care for dependents.

^eIncluding full coverage for spouse and children.

^fPrivate sector employment.

^gPublic sector employment.

^hUrban employment only; see text for details on rural assessments.

ⁱOnly limited hospital care for dependents.

borrowed from pension funds. In some countries, hospital bonds are legally mandated, nonnegotiable pension fund investments. They typically pay negative rates of real interest and may thus become one-way transfers in the long run. In only one case has a country received an international loan for the construction of hospital facilities; in 1975 Costa Rica received a loan from the Inter-American Development Bank for this purpose (Zschock 1980). The loan was guaranteed by the country's central government but is being repaid by the social insurance institute from its own revenues.

Based on the limited information available on social insurance financing, support of medical care is not as ample as is widely believed. The same can be said about public health care financing from general revenues. The data presented in table 4, which have been adjusted to avoid double-counting, reveal combined levels of financing of considerably less than 3 percent of GDP in all but three of thirteen Latin American countries for which comparable information is available.³ Only Costa Rica, Mexico, and Panama—all countries with relatively high levels of GDP per capita—have given unusually high priority to medical care, as reflected in their expenditure levels of about 4.5 percent of GDP in 1977. In some of the other countries, governmental medical care programs other than social insurance and public health may be of considerable importance in terms of expenditures and coverage. Moreover, private household and industry expenditures on medical care are likely to represent another substantial component of total health sector expenditures in all of the sixteen countries.⁴

Medical Care Expenditures

The widely held view that national expenditures on medical care are rising more rapidly than national incomes in most market-oriented economies can neither be supported nor rejected, based on cross-country comparison of the limited data for Latin America. The available information on medical care expenditures under public health and social insurance, summarized in table 4, shows no strong tendency for higher-income countries to spend higher proportions of their GDP on governmental health care than do lower-income countries.⁵

A comparison of the medical care expenditure ratios in table 4 nevertheless reveals several noteworthy differences. Three countries that primarily use the direct pattern of medical care delivery—Costa Rica, Mexico, and Panama—allocate relatively large shares of their GDP to the health sector. Three countries using the indirect pattern—Argentina, Brazil, and Uruguay—allocate relatively small shares of their GDP to the health sector. In all six countries, social insurance provides over 50 percent of the total coverage. In Venezuela the GDP share of health

TABLE 4 *Expenditures on Public Health and on Medical Care under Social Insurance as Shares of GDP in Sixteen Latin American Countries in 1977*

Countries	Shares of GDP		
	Public Health (%)	Medical Care under Social Insurance (%)	Combined Shares (%)
Seven relatively high-income countries			
Argentina	n.a.	n.a.	2.66 ^b
Brazil	0.68	1.43	2.11
Costa Rica	0.64	3.83	4.47
Mexico	n.a.	n.a.	4.35 ^b
Panama	1.52	3.07	4.59
Uruguay	0.89 ^c	0.52 ^c	1.41 ^c
Venezuela	1.50	0.70	2.20
Nine relatively low-income countries			
Bolivia	0.99	1.29	2.28
Colombia	0.76	0.85	1.61
Dominican Republic	1.22	0.37	1.59
Ecuador	1.33	0.67	2.00
El Salvador	1.36	0.55	1.91
Guatemala	0.82	0.54	1.36
Honduras	1.61	0.80	2.41
Paraguay	n.a.	n.a.	2.73 ^b
Peru	1.01	0.75	1.76

Sources: Public health shares were calculated from data found in International Monetary Fund, *Government Finance Statistics Yearbook, 1981*, exclusive of any social security transfers shown in the source. Unless otherwise noted, the source of social insurance data is International Labour Office, *The Cost of Social Security: Tenth International Inquiry, 1975-1977, Basic Tables* (Geneva: ILO, 1981), exclusive of any public health and other nonsocial insurance expenditures shown in the source.

Social insurance data for Peru were taken from Carlos Novoa Zañartu and Enrique Rubín de Celis, "Aspectos financieros del sector salud, Perú, 1979," paper presented at a workshop on health care financing in Central America and the Andean region, sponsored by the American Public Health Association in Melgar, Colombia, April 1979 (see Zschock 1980). Social insurance data for Ecuador were taken from an untitled workshop paper by the Ecuadorian Ministry of Public Health presented at the conference in Melgar, Colombia, in April 1979 (see Zschock 1980). Data for public health expenditures in Colombia were taken from Dieter K. Zschock, "Public Health Sector Revenues and Expenditures in Colombia, 1971-80," mimeo, May 1982. The data in the above three papers were derived from primary sources in the three countries.

^aThe notation n.a. indicates that data were not available.

^bCombined shares for Argentina, Mexico, and Paraguay are taken from the IMF's *Government Finance Statistics Yearbook, 1981* (the ILO source does not include these three countries).

^cThe available figures for Uruguay are for 1976 rather than 1977.

is also relatively small, but in this case, the public health portion still exceeds the social insurance portion in terms of coverage.

In the nine lower-income countries, public health and social insurance expenditures for medical care are not systematically smaller percentages of GDP than in the higher-income countries. Yet differences are also apparent among these countries, particularly in the relative size of GDP shares represented by public health and social insurance payments for medical care. In all of these countries except Colombia, the public health share exceeds the social insurance share of GDP, reflecting the relatively larger role that these countries assign to public health in providing services.

Unfortunately, no details are available for standard categories of medical expenditures by social insurance programs, such as hospital inpatient care, ambulatory care, and pharmaceuticals. Ministries of health in some countries report their expenditures in terms of these categories, but social insurance programs do not. Thus itemized expenditure comparisons cannot be made, nor are the costs of medical care under social insurance comparable with those of public health service.

Costs of Medical Care

Turning to the relative magnitude of medical care expenditures within total social insurance financing, table 5 shows that in several countries these proportions are large while in others they are small. One can detect here a tendency for eight countries using the direct approach to the delivery of services to spend larger proportions of their social insurance receipts on medical care than do three countries that rely primarily on the indirect pattern. Relatively high proportions of social insurance expenditures are allocated to medical care in Bolivia, Colombia, the Dominican Republic, Guatemala, El Salvador, Costa Rica, Panama, and Venezuela—that is, in five low-income and three high-income countries. All use the direct pattern. Relatively low proportions of social insurance expenditures are allocated to medical care in Argentina, Brazil, and Uruguay, all three being relatively high-income countries that use the indirect pattern of services delivery. There is no obvious relation, however, between the medical share of expenditures and the extent of coverage.

The cost per capita of medical care for the population covered by social insurance, shown in table 6, also varies with some predictability. Among the five relatively high-income countries, per capita cost of medical care ranges between U.S. \$50 and \$75 for the three countries predominantly using the direct pattern (Costa Rica, Panama, and Venezuela) and between U.S. \$15 and \$25 for the two that use the indirect pattern (Uruguay and Brazil). Among the eight relatively low-income

TABLE 5 *Composition of Social Insurance Expenditures in Eleven Latin American Countries in 1977*

	Benefits			Admin. Expenses (%)	Other Expenses (%)	Unexpended Receipts (%)	Total (%)
	Medical Care (%)	Other (%)	Subtotal (%)				
Six relatively high-income countries							
Argentina (I) ^a	19.6	57.3	76.9	3.2		19.9	100.0
Brazil (I)	22.7	62.2	84.9	12.1	1.5	1.5	100.0
Costa Rica (D) ^b	51.9	16.8	68.7	6.1	1.9	23.3	100.0
Panama (D)	33.1	36.1	69.2	4.8	2.5	23.5	100.0
Uruguay (I)	5.0	70.1	75.1	7.0	8.8	9.1	100.0
Venezuela (D)	37.2	20.7	57.9	13.9	1.0	27.2	100.0
Five relatively low-income countries							
Bolivia (D)	38.5	28.1	66.6	10.4		23.0	100.0
Colombia (D)	30.5	52.7	83.2	6.9	1.2	8.7	100.0
Dominican Republic (D) ^c	31.5	37.3	68.9	13.7	13.3	4.2	100.0
El Salvador (D)	29.3	30.0	59.3	8.4	1.7	30.6	100.0
Guatemala (D)	31.0	30.5	61.5	7.2	0.1	31.2	100.0

Source: International Labour Office, *The Cost of Social Security, Tenth International Inquiry, 1975-1977, Basic Tables* (Geneva: ILO, 1981). Percentages were calculated by the author. Sources refer to both private and public sector social insurance funds.

^aI indicates an indirect pattern of medical care.

^bD indicates a direct pattern of medical care.

^cData are for 1976 rather than 1977.

countries, all of which use the direct pattern, per capita costs are relatively highest for those countries with the most limited coverage (5–10 percent) and somewhat lower for countries with somewhat more extensive coverage (10–20 percent). The three lowest-income countries with limited coverage (Bolivia, El Salvador, and Honduras) spend about U.S. \$50 per capita. The slightly higher-income countries with somewhat more extensive coverage (Colombia, Guatemala, Peru) spend between U.S. \$25 and \$50 per capita, and the two countries with very limited coverage but still higher income spend between U.S. \$75 and \$100 per capita (the Dominican Republic and Ecuador).

Taken together, the data shown here—and the generalizations drawn from them—suggest that expenditures by a health care system using combinations of public health and medical care under social insurance do not vary predictably with differences in GDP per capita. Costs, however, may be higher under the direct pattern than under the indirect pattern of medical care under social insurance. If comparable

TABLE 6 *System of Medical Care Delivery and Medical Care Expenditures per Capita under Social Insurance in Thirteen Countries in 1977*

<i>System of Medical Care Delivery</i>	<i>Per Capita Expenditure for the Covered Population (dollars)</i>
Five relatively high-income countries	
Brazil	indirect 23
Costa Rica	direct 51
Panama	direct 74
Uruguay	indirect 14
Venezuela	direct 59
Eight relatively low-income countries	
Bolivia	direct 52
Colombia	direct 49
Dominican Republic	direct 73
Ecudador	direct 89
El Salvador	direct 52
Guatemala	direct 25
Honduras	direct 48
Peru	direct 36

Sources: Per capita expenditures were calculated by the author from data used in tables 1 and 4.

data were available on the missing link, which is the amount of direct private household expenditures on medical care, a more predictable aggregate relationship with GDP per capita might emerge.

Problems of Financing Medical Care

The obstacles that wage-based financing of medical care present for the expansion of coverage must be viewed within the total cost of social insurance. Medical care funds impose combined wage assessments of 6 to 12 percent, but this figure represents only half or less of the total social insurance levies. The limit of such contributions may have been reached. High levels of contributions inhibit expansion of coverage to segments of the labor force with relatively lower wages. Employers argue that social insurance costs limit their ability to expand employment and cause them to select more capital-intensive production alternatives. Policymakers also have begun to recognize the instability of the wage base as a source of revenues. Not only is the in-

come from wage levies subject to economic fluctuations, which makes them an unstable source of revenues in the short run, but their long-term expansion becomes doubtful as production becomes increasingly capital-intensive. If the labor share of total factor costs is shrinking, social insurance income may become inelastic with respect to economic growth (ISSA 1982).

For these reasons, increasing the rates of contribution is not widely advocated as a feasible solution to deficit problems. Expanding the number of enterprises registered for social insurance coverage and increasing collections may be possible, and it would be more equitable. But most funds have administrative limitations that become major constraints. Their record-keeping on employers who should contribute and on employees who are covered is usually deficient, as is their control over expenditures. Social insurance funds also face opposition from employers to increasing collections and from beneficiaries to decreasing expenditures. Thus transfers from government revenues or from other insurance funds are usually the easier solution, even though both are fiscally unsound and financially inequitable. The only justification for the use of tax revenues is generally thought to be the inclusion under insurance coverage of medically indigent segments of the population.

Nevertheless, the solution to chronic deficits often involves proposals for government subsidies from general tax revenues, rather than increases in wage assessments, on the assumption that their incidence is more progressive than social insurance contributions. This may not be the case, however. First of all, lower-income countries tend to have lower tax revenues (calculated as a proportion of GDP) and their sources tend to be regressive. The burden of general tax revenues typically falls heavily on the agricultural sector if it is the major source of exports (and thus of export taxes), thereby contributing to the low wage levels of rural workers. Sales taxes are a second major source of general tax revenues and are typically imposed on products whose consumption accounts for a large proportion of the earnings of low-income families. There is really no justification for subsidizing social insurance funds from general tax revenues unless it is to expand coverage to the rural and urban poor. In that case, it probably does not constitute a subsidy if the above argument concerning the sources and incidence of general tax revenue holds true.

Greater reliance on the indirect pattern is also regarded as a means to control expenditures while expanding coverage for medical care under social insurance. It is not clear, however, whether the indirect pattern is in fact less expensive or whether it merely shifts part of the total cost. Costs could be shifted to the public health sector through the use of its facilities without average cost reimbursement or to the

beneficiary, who may be forced to pay additionally for private services, either directly or by purchasing coinsurance.

CONCLUSION

The goal of this review has been to provide a new perspective on the coverage, organization, and financing of medical care under social insurance in the sixteen Latin American countries that combine this approach with public health and private medical care. Cross-country comparisons of coverage under social insurance in these "mixed" health systems reveal patterns that differentiate between the region's relatively higher-income countries and its lower-income countries. Social insurance coverage now provides medical care for over half the region's population. Social insurance and public health services now account for roughly equal governmental health care expenditures as proportions of GDP. Social insurance, however, has suffered a "bad press." Its appearance of providing exclusive benefits has obscured its potential for expanding coverage, at least under the system's medical care program.

Economic growth seems to have facilitated gradual, but significant, expansion in protection under social insurance. Only the social insurance systems of the lower-income countries remain limited to a small, privileged membership. These systems tend to be organizationally top-heavy and concerned with protecting their resources from erosion through expansion of population coverage. Instead, they prefer to intensify coverage for their current members, typically through the direct pattern of medical care.

While cross-country comparisons do not show a uniform evolution, they indicate that expansion of coverage requires coordination between social insurance and public health. They also suggest that the direct pattern of medical care delivery is more costly than the indirect pattern. Unfortunately, because of the perceived weakness of public health services in the lower-income countries, and perhaps because of the limited affordability of private medical care, the direct pattern predominates under social insurance programs in these countries. This situation may hinder expansion of coverage as contributors and providers alike seek to protect their privileges. In this context, Mesa-Lago's general thesis retains its explanatory power.

Fortunately, only a minority of the region's population remains affected by this exclusivity of social insurance coverage. Moreover, precedents now exist for circumventing this obstacle. Through financing from general or earmarked tax revenues, the medically indigent in urban slums and rural areas can be included under social insurance

coverage for medical care, as has been demonstrated in Brazil, Mexico, and Ecuador. But the question of whether social insurance, public health, or private medicine, or any mixture of the three mechanisms of financing and medical care delivery is most appropriate for countries at different levels of development remains an unresolved issue.

NOTES

1. The present review purposely uses the term *social insurance* rather than *social security*. The latter term has a broader meaning that encompasses risk-sharing plans as well as welfare programs. Social insurance is more narrowly defined and refers only to specific risk protection for specified population groups. But the distinction is not strictly adhered to internationally, and the two terms are often used interchangeably. The medical care services that are the subject of this review, however, all refer to themselves as belonging to institutions of "social insurance" (*seguro social*). Social insurance organizations generally do not provide services to segments of the population that do not contribute to the organizations' financial support. They typically regard the protection they provide as a right of membership, attained through employment and the payment of wage-based contributions shared by employer and employee. Protection may include the financially indigent, but only if the state pays for their coverage from general tax revenue.
2. The ILO survey of social security expenditures is especially misleading. It includes "public health services" on the revenue and expenditure sides in its *Basic Tables* (ILO 1981b). The more generally available summary of the survey's findings, however, includes public health financing under "state participation" on the revenue side of social security, while on the expenditure side it includes this item under "medical care" provided by social security (ILO 1981a). The *Basic Tables* cite the data source for "public health services" as the United Nations' *Statistical Yearbook*, 1978, which shows the same data as central government expenditures on public health care. Comparing the ILO data on "medical care" with central government "health" expenditures would therefore involve double-counting unless the former is adjusted to exclude "public health services." One must also deduct from central government health expenditures those subtotals shown as coming from social insurance, again to avoid double-counting in comparing these two sources. The data on social insurance financing shown in table 4 have been adjusted accordingly. Two other adjustments have been made in that table: first, a prorated proportion of social insurance administrative expenditures has been included in medical care under social insurance; and second, only medical care expenditure data for private and public sector social insurance plans (lines I and III in *Basic Tables*) have been used. Medical care expenditures for family welfare, public assistance, and other plans that are not social insurance programs have been excluded.
3. The source (ILO 1981b) does not include data for Argentina, Mexico, and Paraguay.
4. Three anonymous readers of an earlier version of this paper criticized the omission of private expenditures on medical care from the review. The only source for data on household expenditures, however, are several urban surveys whose results have been summarized by Musgrave (1983b). His findings indicate that direct household expenditures for medical care in ten cities reflect an income elasticity of demand of 1.5 percent and that expenditures range from 1 to 6 percent of total direct household expenditures. From these results, one can derive estimates of direct household expenditures on medical care as a proportion of GDP, given a reasonable estimate of the share of disposable household income in GDP. Such rough calculations have been the basis for estimates of direct household expenditures equivalent to about 2 percent of GDP, plus or minus one percentage point, depending on a country's level of development and the characteristics of its health care system. This share represents between one-third and one-half of total health sector expenditures, with some

- indication that the share of private expenditures shrinks as the share of social insurance payment increases.
5. The examples of Costa Rica, Mexico, and Panama might suggest that relatively higher-income countries can allocate proportionately more resources to health care than can lower-income countries. In the absence of reliable data on private sector expenditures, however, and considering the potential explanatory power of other variables (such as morbidity, organization, and pricing structures), such interpretations are analytically unsupportable with the limited data available.

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