BRAZILIAN HEALTH CARE DELIVERY DURING A RECESSION[1]

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Basic statistics on the funding of Brazilian health services during a period of noteworthy economic problems for that country indicate that such funding has been effectively maintained.

Introduction

An examination of the extent to which Brazil's recent recession and international debt problems have affected its health care delivery system provides some insight into the impact of economic stress on social well-being—both in Brazil and in other countries with pluralistic economies. Specifically, it shows that although such economic problems as falling product demand, an unfavorable balance of payments, and budget restrictions imposed by the International Monetary Fund (IMF) could conceivably prompt major reductions in health care expenditures and undesirable consequences such as increases in morbidity and mortality, these outcomes are not inevitable.

The Brazilian health care system includes a large and rapidly growing national workers' insurance program, numerous private hospitals and HMO-like groups operated for profit, government clinics and hospitals, and physicians who often combine both salaried and fee-for-service practices. While elements of this system provide extremely sophisticated medical care for the well-to-do, the public sector is overwhelmed by the needs of that large proportion of the population which lacks even basic nutrition and sanitation.

The combination of these diverse elements and the importance of health care services to Brazilian development make the health impact of economic stress especially interesting. Indeed, health care is Brazil's largest social service. As such, it has been criticized both for its rapidly growing expenditures and for the limited services available to the poor. The question this article addresses is the extent to which recent economic crises have appeared to shift the pattern of growing health care expenditure away from its existing course. The sections that follow review certain salient features of the Brazilian health care system, describe the effects of Brazil's economic crises, assess the apparent effects of those crises on health expenditures, and discuss certain implications for health care.

Health Care in Brazil

The Brazilian health care system reflects prevailing income distribution patterns. Just as the share of Brazil's national wealth captured by the richest 5% of the people has increased during most of the expansionary years since 1960 (*1*, p. 101, and *2*, p. 706), so there is a great disparity between the qualities and quantities of health care available to the rich and poor. The best hospitals in the three largest cities—Rio de Janeiro, São Paulo, and Belo Horizonte—are equivalent to the most technically sophisticated tertiary care centers in the United States. But most Brazilians live outside their range or cannot afford their services; indeed, many are too poor and ill-informed to conquer pediatric diarrhea and malnutrition.

Throughout most of the country the greatest proportion of health insurance coverage is provided by the county, state, and national governments. The largest of the agencies involved is the National Institute for Medical Assistance and

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1983 the Central Bank reported a debt of US$81.3 billion, while the Brazilian press indicated an indebtedness of over US$90 billion.

Meanwhile, the interest rates that Brazil has been paying on its foreign debt are closely related to the prime interest rate in the United States, which has been extremely high by historic standards since 1979 (Table 2).

Finally, not only Brazil but also its largest trading partners (Japan, Germany, the Netherlands, and the United States) were adversely affected by the recent recession. Thus, at a time when Brazil needed strong exports to make its debt payments and combat its own recession, the gross national or domestic products of these trading partners were unusually weak (Table 3).

As a direct result of these economic problems, in 1980 the IMF imposed a series of constraints as conditions for additional credit *(6)*. Later, when Brazil returned to the IMF for a US$4.9 billion loan in December 1982, the government agreed to a more restrictive package that included restrictions on balance of payments deficits and public sector borrowing *(7)*. As these funds became particularly necessary during the summer of 1983, the reforms actually proposed by President Figueiredo included subsidy reductions for export, agriculture, and small-business financing; petroleum product price increases; in-

Table 2. Average prime interest rate charged by US banks.

Year	Prime rate (%)
1970	7.91
1971	5.72
1972	5.25
1973	8.03
1974	10.81
1975	7.86
1976	6.84
1977	6.83
1978	9.06
1979	12.67
1980	15.27
1981	18.87
1982	14.86
1983	10.79

Source: Council of Economic Advisers, *Economic Report of the President*, February 1984, Table B-67, U S. Government Printing Office, Washington, D.C., U.S.A.

Table 3. Percentage changes in the real values of the gross national (or domestic) products of the United States, the Netherlands, Germany, Japan, and Brazil, 1969-1983.

Fiscal year	Percentage changes in the countries shown:				
	The United States	The Netherlands	Germany	Japan	Brazil
69-70	-0.2	6.4	5.0	9.9	9.8
70-71	3.4	4.7	3.2	4.7	12.0
71-72	5.7	3.5	4.2	9.0	11.2
72-73	5.8	5.9	4.5	8.8	14.0
73-74	-0.6	3.5	0.5	-1.2	9.5
74-75	-1.2	-2.0	-1.6	2.4	5.6
75-76	5.4	5.6	5.5	5.3	9.7
76-77	5.5	7.8	2.8	5.3	5.4
77-78	5.0	2.1	3.5	5.1	4.8
78-79	2.8	2.5	4.0	5.2	6.7
79-80	-0.3	0.8	1.9	4.8	7.9
80-81	2.6	-0.8	-0.3	4.0	-3.5
81-82	-1.9	-1.6	-1.1	3.3	n.a.
82-83	3.4	-0.5	1.3	n.a.	n.a.

Source: Federal Reserve Bank of St. Louis *(5)*.
[1]n.a = not available.

Social Insurance (Instituto Nacional de Assistência Médica de Previdência Social—INAMPS). By itself, INAMPS accounted for 1.3% of Brazil's Gross Domestic Product (GDP) in 1981. Indeed, only four other national enterprises[3] have larger budgets (*3*, pp. 10-11). Recent INAMPS calculations indicate that 29.7% of the urban population in Brazil (86,990,556 people) were insured workers in 1982, while another 55.9% were eligible for INAMPS benefits as members of insured workers' families.

INAMPS has provided third-party coverage to all employed individuals and their families since 1978. Covered activities have included a range of ambulatory care and inpatient hospital services. Eligibility has been based on a loose definition—notation of recent employment on each employee's or family member's worker card. INAMPS pays physicians according to a "service unit" similar to the California relative value scale used in the state of California, U.S.A. Hospitals are reimbursed on the basis of their unaudited cost statements.

A second federal program, run by the Ministry of Health, has a longer history and has focused on certain primary and preventive services, largely for the relatively poor. However, its budget is only an eighth the size of the INAMPS budget *(3)*.

In addition, the ambulatory and hospital services offered by many state, county, and municipal governments offer a third source of health care for Brazilians. Specifically, every state government and many local governments have ministries of health that fund these services' operating expenses as well as certain capital outlays.

Private profit-seeking groups, which are organized much like HMOs in the United States, have prospered in certain states like São Paulo, where the federal and state hospitals have appeared relatively undesirable. However, such groups have had less success in Rio de Janeiro, where the national government has long maintained excellent hospitals.

[3]Petrobras (oil), Siderbras (iron and steel), Electrobras, and the Banco de Brasil.

Economic Conditions

At least until the current economic problems began, there had been considerable hope that Brazil, with a population roughly half that of the United States, could "break out" of the third world via an extended period of rapid economic expansion. However, since the early 1970s Brazil has been adversely affected by four closely related economic events: the oil price increases of 1973, an increase in Brazil's own foreign debt during the middle to late 1970s, the high international interest rates that followed the 1979 United States Federal Reserve Board's change in monetary policy, and the accompanying recession in the United States and Europe. OPEC's oil price increases had a particularly negative impact on Brazil because the country has only limited petroleum reserves of its own.[4]

Brazil's foreign debt began growing rapidly in the early 1970s; and, as Central Bank figures show, since that time it has increased by progressively larger annual amounts (Table 1). By

Table 1. Brazil's foreign debt in billions of US dollars, in December of the year indicated.

Year	Amount (in billions of US$)
1970	$5.3
1971	$6.6
1972	$9.5
1973	$12.6
1974	$17.2
1975	$21.2
1976	$26.0
1977	$32.0
1978	$43.5
1979	$49.9
1980	$53.8
1981	$61.4
1982	$69.7
1983	$81.3

Source: Banco Central do Brasil *(4)*.

[4]To supplement these small reserves, which meet only a fraction of national demand, the government has embarked on a program designed to substitute alcohol distilled from eucalyptus trees and sugar cane.

creased bank deposit requirements; a variety of new tax measures; and cuts in federally mandated cost-of-living wage increases to 80% of inflation.

Health Care Impacts

One interesting and important question that has been largely overlooked in the crisis atmosphere created by continued foreign debt payment problems is the impact these economic events have had on health care delivery systems.

Their first obvious effect was creation of a conflict between reduction of the funds available for health care services on the one hand and increased demand for these services on the other. More specifically, increased unemployment and IMF pressure to contain budgetary deficits both acted to reduce the funds available to all levels and types of government health services. At the same time, high unemployment and lower family incomes, many of which were already at poverty levels, presumably increased the demand for publicly funded services.

The results of these various pressures can be observed in various statistics. For one thing, even though the IMF's restraints are designed to reduce budgetary deficits rather than budget size, some decline in the budget's size (relative to GDP) would seem likely following imposition of those restraints. In fact, however, the national ("Fiscal Union") budget fell relative to GDP in the relatively prosperous period 1978-1980 (from 8.6% of GDP in 1978 to 6.7% in 1980), and then rose slightly (to 7.0% of GDP during the recession in 1981 and to 7.5% of GDP in 1982—see Table 4).

Because INAMPS provides services for employed people and their families, its budgets are closely related to employment and should be less directly influenced by general economic performance. As far as observed trends are concerned, following a brief growth spurt attributable to the program's initiation in 1978, the INAMPS budget fell relative to GDP in 1980 and remained at about the same level relative to GDP in 1981 and 1982. On the other hand, the budget of the Ministry of Health, whose responsibility focused more on primary care for the

Table 4. Initial national and health care budgets as compared to gross domestic product (GDP) in the years 1978-1982.

Year	Initial budgets (in billions of current cruzeiros)			GDP (in billions of current Cr$)[c]
	INAMPS[a]	Ministry of Health[b]	Fiscal Union[b]	
1978	43,675	5,554	322,000	3,729,798
1979	90,863	8,180	470,830	6,239,402
1980	145,127	11,527	877,863	13,104,285
1981	289,500	21,402	1,888,500	26,832,943
1982	604,037	52,525	4,000,200	53,150,747

[a] *Sources: 1978-1980 budgets:* INAMPS, Departamento de Financas, Coordenadoria de Contabilidade; Comparativo de Despesa Autorizada com a Realizada, 31 Dezembro de 1978-80; mimeographed document, Rio de Janeiro, 1978-80. *1981 budget:* Ministério da Previdência e Assistência Social, INAMPS; Comparativo da Despesa Autorizada com a Realizada, 31 de Dezembro de 1981; mimeographed document, INAMPS, Rio de Janeiro, 1981. *1982 budget:* INAMPS, Secretaria de Planejamento, Departamento de Orçamento; Programa, Execução Orçamentário—Por Natureaz da Despesa, Posição em 31/12/82, mimeographed document, Rio de Janeiro, 1982.

[b] *Sources:* República Federativa do Brasil, *Diário Oficial*, 6 December 1977, 6 December 1978, 4 December 1979, 9 December 1980, and 10 December 1981.

[c] *Source:* Secretaria de Planejamento da Presidência, Fundação Instituto Brasileiro de Geografia e Estatística, *Anuario Estatístico do Brasil, 1982,* Impresso No Centro de Serviços Graficos do IBGE, Rio de Janeiro, 1982, Table 72.

poor and unemployed, experienced a 23% rise relative to GDP in 1982, following a series of relative declines in the 1978-1981 period.

Another effect that could be anticipated from the recession and debt crisis was a relative shift away from capital expenditures and new projects. (In any recession, postponement of capital expenditures or new projects is more likely than reduction of personnel or curtailment of services.) Although INAMPS does not fund most of the federal government's health care investments, its split between operational and capital expenditures is illustrative. Specifically, as Table 5 shows, the INAMPS capital budget fell from about 2% of the total INAMPS budget in 1979-1981 to 0.5% in 1982.

Table 5. INAMPS capital budgets in 1978-1982, expressed as percentages of the total INAMPS budget for each year.

Year	% devoted to capital expenditures
1978	2.76
1979	2.08
1980	1.76
1981	1.74
1982	0.47

Sources: See Table 4, footnote a.

The recession would also seem likely to have increased the difference between budgets and actual expenditures. That is, because the recession was not anticipated, actual INAMPS receipts should have been less than initially predicted. In fact, however, the unanticipated Brazilian inflation of these years (see GDP figures in Table 4 and negative expenditure overruns in Table 6) appears to have had a greater impact than the recession on the differences between initial budgets and expenditures. Another interesting point brought out by the Table 6 figures is that INAMPS health expenditures consistently grew faster than its administrative or pension expenditures.

INAMPS "Reorientation"

Economic problems of the types under discussion are also likely to evoke a programmatic response by the government. Rising needs for health care expenditures combined with falling government income creates political pressure that generates opportunities for new government policies. In Brazil's case, the INAMPS response to this pressure has in many ways paralleled the Medicare reforms of 1982 and 1983 in the United States. That is, the major components of a proposed "reorientation" of INAMPS include (1)

Table 6. INAMPS expenditure overruns in 1979-1982, showing the percentages by which expenditures exceeded the initial budgetary allocations.

Year	% by which expenditures exceeded initial allocations in indicated areas				General Price Index (GPI)[a]
	Administration	Health	Pension and other areas	Total	
1979	-7.76	2.81	-44.83	1.02	76.8
1980	2.89	31.19	-13.49	28.69	108.5
1981	20.81	25.56	12.41	25.06	92.8
1982	8.94	20.68	-0.87	19.64	99.2

Sources: INAMPS, Secretaria de Planejamento, Departamento de Orçamento—Programa, Execução Orçamentária—Por Programa de Trabalho, Posição em 31/12/78-82, Rio de Janeiro; and Banco do Brasil, *Boletim Mensual* 19(3), 1983, Table 2.6, p.167.

[a]The GPI (overall supply) is a weighted average of the wholesale price index, the cost of living in Rio de Janeiro, and the building cost in Rio de Janeiro.

paying hospitals a predetermined fee per admission, (2) issuing a "health card" that will facilitate utilization controls, (3) attempting to increase the utilization of existing government hospital and clinic capacities, and (4) increasing collaboration between the various national, state, and local government payment schemes *(8)*.

Even before INAMPS began operating, however, Brazilians had the same concerns about rapidly rising hospital expenditures that have plagued other nations with pluralistic health care systems. Health care expenditures grew from less than 1% to over 5% of GDP between 1950 and 1980 *(3)*. Thus, paying hospitals per clinical or surgical procedure presented INAMPS with an opportunity to control its expenditures and to shape financial incentives so that hospitals would be more likely to perform procedures that INAMPS deemed desirable.

Until recently, Brazilians have strongly resisted dependence upon a national health identity card. The potential for misuse of the health care system has always been judged less onerous than the potential political or military misuse of computerized individual health records. Therefore, while INAMPS has had one of the best and largest computers in the country, individual privacy was maintained by providing it with insufficient identifying information. The proposed "reorientation" of the health care system includes a health identity card in the hope that political developments of 1982 diminished the likelihood of the data being misused.

Overall, more efficient utilization of existing government health service capabilities depends upon two developments. First, the facilities of many of these services now need modernization. Indeed, some facilities are underutilized because the same services are provided better by private hospitals. Since INAMPS pays for benefits provided by either government or private hospitals, patients with a choice who face this situation have selected the higher-cost private care. Second, there are occasions when similar services are offered by different governments in the same geographic area. The "reorientation" seeks to increase the quality of health care and reduce health costs, both by investing in a modernization and expansion of government hospitals and by increasing the collaboration between INAMPS, the national ministry of health, and each of the various state and local health ministries.

An experimental trial of this "reorientation" was begun in the state of Parana at the beginning of 1982. Government tabulations of the initial year's results indicate a phenomenon similar to the Salkever-Bice observation about the effects of capital constraints *(9)*. (Salkever and Bice found that certificate-of-need controls on the number of hospital beds did not effectively reduce hospital investments.) In Parana, the "reorientation" correlates with a reduction in the number of admissions but also with an almost equal proportional increase in treatment costs. The net effect is a one-year growth in expenditures that is only slightly below that of the rest of the nation *(10)*. These preliminary analyses are insufficient to determine whether the higher cost per admission is largely attributable to the desirable deletion of unnecessary (and less expensive) procedures or to the undesirable "diagnostic-related group creep," a tendency to substitute costly for cheap diagnoses that is being followed carefully in the United States.

Concluding Remarks

In sum, aggregate statistics from INAMPS, Brazil's largest health insurance program, indicate that levels of public spending on health care have been maintained despite the problems Brazil has had with its foreign debt, inflation, and recession. While there is some evidence of major reductions in expenditures on new projects and on expansions, aggregate expenditures have continued their established growth patterns.

Furthermore, INAMPS has reached the experimental stage with a proposed national "reorientation" program that has achieved modest reductions in health care expenditures in one state. However, plans to extend this "reorientation" to the rest of the nation are meeting considerable political opposition. For one thing, the

"reorientation" implicitly gives increased emphasis to primary care. Private hospitals and health care groups are not entirely enthusiastic about the potential loss of resources this shift may impose upon them. Additionally, the efficiency of a shift to public health care (as compared to government reduction of expenditures) is a subject of some controversy.

In a more optimistic vein, an extended international economic recovery, if it is not extinguished by a major debt crisis, seems likely (1) to reduce the governmental need to curtail the growth of health care expenditures and (2) to increase the desire of employed individuals for additional high-quality (and high-cost) health care. In such expansionary period, the political acceptability of the proposed INAMPS "reorientation" is likely to be reduced.

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SUMMARY

Examination of Brazil's funding of public health services during a time of economic trouble with foreign debts, inflation, and recession yields a number of interesting findings.

The Brazilian health care system includes the National Institute for Medical Assistance and Social Insurance (INAMPS) that provides services for employed people and their families; Ministry of Health services directed mainly at the relatively poor and unemployed; local and state government health services; and private hospitals and HMO-like groups operated for profit. So far as the federally funded health services are concerned, INAMPS accounted for over 90% of the combined health ministry/INAMPS budgetary allotment in 1982.

With regard to recent federal budgets, the INAMPS budget remained at about the same level relative to gross domestic product (GDP) in the recessionary 1981-1982 period; in contrast, the health ministry budget rose by 23% relative to GDP in 1982, following a series of relative declines in the 1978-1981 period. It is also interesting to note that INAMPS outlays for capital expenditures declined sharply in 1982, and that the "health expenditures" portion of the INAMPS budget grew faster throughout the 1979-1982 period than did portions of the budget devoted to administrative, pension-related, and other expenditures. In addition, a major modification of the INAMPS program has been proposed that would involve investing in modernization of government hospitals and providing closer collaboration between INAMPS and other government health services. A large-scale trial of this proposed "reorientation" of INAMPS began in the state of Parana in 1982.

Overall, these observations indicate that previous levels of public spending on health care have been maintained, and that progress in modifying major programs has proved feasible, despite Brazil's prevailing economic troubles.

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