EDUCATION IN HEALTH ADMINISTRATION: AN ASSESSMENT OF THE BRAZILIAN CASE[1]

Marcos Kisil[2]

The following account seeks to provide a brief overview of the Brazilian health service system and its programs, with emphasis on current policies; to sketch out what is being done regarding education in health administration; and to examine some of the more innovative programs and activities within this field.

Introduction: The Brazilian Health Service System and Its Programs

Brazil's health service system is characterized by a multiplicity of public agencies that often compete and overlap, and by concentration of its resources in high-income urban core areas. Three main groups of health care providers exist in Brazil. These work within (a) the private subsector, which covers about 23 million people or 20% of the population; (b) the official subsector, which covers about 25 million people (an additional 20%); and (c) the social security system, which covers about 50 million people (another 40%). About 20 million people are not covered by any institutional health care services.

The Private Subsector

Private subsector services include services provided by private practitioners, either directly to individual households or through employer-wide contracts and cooperative arrangements to groups of people. (Private practitioners also work in large numbers for the social security system, where they are compensated on the basis of agreed fees-for-service for each type of intervention. About 35 million people or 70% of the social security beneficiaries are covered this way.) The private sector is largely unregulated, and therefore is difficult to monitor and evaluate. However, as will be seen, private medical and other services contracted by the social security system are deemed to be very wasteful.

The Official Subsector

The official subsector has three levels. At the highest level is the Federal Ministry of Health, which has regulatory and coordinating powers, is responsible for nationwide health campaigns, and provides technical assistance to individual agencies and states. This body also has overall jurisdiction (but little real control) of several specialized national agencies, including the Superintendency of Campaigns (*Superintendencia de Campanhas*—SUCAM) working against endemic and epidemic diseases, the Special Public Health Services Foundation (*Fundação de Serviços Especiais de Saúde Pública*—FSESP) dealing with basic health and sanitation in border regions and other strategic areas, and the National Institute of Nutrition (*Instituto Nacional de Nutrição*—INAN).

The next echelon of the public health structure consists of the State Secretariats of Health (SES). Several years ago the Federal Health Ministry gave the state secretariats full day-to-day responsibility for public health care in their respective states. These responsibilities, however, are not being adequately discharged in

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[2]Assistant Professor, University of São Paulo School of Public Health, and Academic Coordinator, PROAHSA, Getulio Vargas Foundation.

many cases. The main reasons seem to be lack of operational flexibility (originating in civil service and other regulations) and lack of political support from the state governments, all of which has resulted in poor organization, management, staffing, and funding.

The third level of the official subsector is comprised of the municipal governments' health secretariats, which are the basic public health service units. However, most of the country's 4,000-odd municipal administrations are so poorly managed and funded that their health services are often limited to providing small additional funds for state-managed health activities, and to operating ambulance services. Notable exceptions to this pattern are provided by municipalities in large, industrialized metropolitan areas such as São Paulo, Rio de Janeiro, and Curitiba where the municipal governments are financially strong and have engaged in much broader development of their own health services. A particularly important circumstance supporting the potential expansion of municipal (as compared to state) services is the operational flexibility accorded by law to municipal governments—which includes flexibility in matters related to organization, staffing, and levels of remuneration.

The Social Security System

Social security health services are provided by the health branch (INAMPS) of the Ministry of Welfare and Social Security (MPAS). INAMPS,[3] which acts as an umbrella organization for previously separate urban, rural, and special health care funds, is financed by employer and employee contributions amounting to 4% of payrolls in recent years. This represents a substantial effort and a significant level of health funding by international standards.

INAMPS' services (the quality of which varies widely) are provided through its own facilities, and also (most importantly) through private hospitals and individual physicians. INAMPS' multiple arrangements, as well as the widely varying circumstances in which it operates in different regions of the country, make its overall evaluation difficult. It is evident, however, that social security health financing has grown consistently over the years with increasing urbanization (INAMPS' main clientele is the urban labor force) and as a result of expanded coverage provided to new groups of workers. In contrast to the Ministry of Health and State Secretariats of Health, which must fund their programs through general revenue allocations, INAMPS is funded through earmarked payroll taxes. This has provided INAMPS with a guaranteed and constantly increasing revenue base, which has effectively shielded it from the vagaries of legislative review.

It is also generally agreed that: (a) INAMPS provides almost exclusively curative (as opposed to preventive) medicine; (b) such curative medicine tends to be more technically oriented than warranted either by the needs of the bulk of INAMPS' beneficiaries or by available financing; (c) INAMPS' control of its own services is deemed poor, and its control over the services it contracts from the private sector is considered even worse; and finally (d) as a result of all these circumstances, relatively small numbers of better-paid urban workers and beneficiaries with intensive care needs are being over-serviced with very high-cost curative medical technology, while the bulk of the beneficiaries are being inadequately covered through curative interventions, and all the beneficiaries lack benefits that could be provided through preventive care. These circumstances, which foster inequities of coverage and increase waste substantially, are being made more critical by rapid urbanization, INAMPS' recurrent financial difficulties, and popular pressure to increase and improve coverage.

Planning

There is no effective agency planning (despite the existence of planning units in all agencies),

[3]INAMPS = *Instituto Nacional de Assistência Médica de Previdência Social* (National Institute for Social Security Medical Care).

and consequently there is no national health development planning in Brazil. The negative impact of this on health care is compounded by a lack of managerially oriented information systems and a lack of monitoring and evaluation activities. Operational research is being carried out in a few places, notably in Minas Gerais with the participation of the State Secretariat of Health and selected municipalities, but is clearly inadequate elsewhere. These are priority activities needed in order to improve the equity, effectiveness, and efficiency of the health services.

Sector Performance

Coverage

Three salient features characterize health care coverage in Brazil: First, the predominant role of the social security subsystem and its overwhelming orientation to high-cost curative care; second, wide divergences in the nature, frequency, and intensity of coverage among and within subsystems combined with a high degree of waste; and third, the still large number of people (20 million) who do not have access to modern health care. Prerequisites for achieving a solution to these problems include agreement as to the definition of basic health coverage, its objectives, its intensity, its cost levels, and its priority. An additional prerequisite is interagency cooperation based on planned targets, standard service models, and monitoring.

Services

The pluralistic nature of the health care system is reflected in the existence of a variety of health facilities and institutions. Primary care is provided by physicians in private practice; by different types of health centers staffed by physicians and sometimes by auxiliary personnel; by health posts; by large outpatient departments (*ambulatorios*) of public and private hospitals; and by special urban emergency units. Secondary care is provided by public hospitals, private hospitals, and rural referral health centers (*unidades mistas*). Tertiary care is provided by larger referral hospitals in urban centers, by university hospitals, and by a variety of specialized institutions.

The overall ratios of health personnel, facilities, and services to the population are below those of other Latin American countries at a similar stage of development. For example, the average numbers of medical and medical-related visits per 100 population per year for 1978 were 120 in Brazil, 130 in Colombia, and 180 in Chile, while a desirable 1980 standard for middle-income Latin American countries was set by the Pan American Health Organization at 200. Water supply and sewerage services (which have an important impact on health) are respectively provided to only 55% and 30% of the Brazilian population; these percentages are lower than comparable percentages in Chile and Colombia.

However, general statistics such as these have only limited relevance because health manpower and facilities tend to be distributed in accordance with regional levels of development and strongly favor the core areas of large urban centers to the detriment of poor periurban and rural areas. An analysis of the distribution of health manpower and facilities in 1975 revealed that metropolitan core areas had four times as many physicians and dentists per given population, on the average, than did the rural and poor periurban areas. Likewise, the metropolitan core areas had eight to 10 times as many nurses, nursing auxiliaries, and hospital beds per given population, and eight to 10 times as many people provided with water supply and adequate excreta disposal services. This no doubt is due to the basic dualism of Brazil's society and economy and to a desire by health workers for the better living conditions and positions in adequate health facilities that are generally available only in high-income central metropolitan areas. As a result, there seems to be grossly inadequate and worsening health service coverage in the poor suburbs of large cities (which are the nation's fastest-growing population areas), and also in the medium-size cities and their surrounding rural areas.

Examples abound of the inequitable treatment and waste created by these conditions. For instance, 90% to 95% of all well babies in the metropolitan areas are treated by pediatricians instead of by nurses, and more than 60% of the tuberculosis and leprosy cases are handled by tuberculosis specialists and by dermatologists, respectively, instead of by general practitioners. In a similar vein, INAMPS' contracted services with private physicians and hospitals result in a much higher intensity of care than the intensity of care provided by state facilities or INAMPS' own services—to wit, some 30 X-rays and 60 laboratory examinations per 100 outpatient consultations are provided by the contracted services, versus seven X-rays and 15 laboratory examinations per 100 consultations at the state and INAMPS services; 100 consultations at the contracted services produce an average of 15 hospitalizations, as compared to three hospitalizations per 100 consultations at state and INAMPS services; and the contracted services treat some 42% of all consultations as emergencies, while only 12% are treated as emergencies by the state and INAMPS services. Furthermore, many INAMPS-owned hospitals are either closed or underutilized, while additional private hospitals are contracted each year. These conditions call for radical reorientation and reorganization of the existing health services in order to improve both equity and performance.

Financing

Brazil's expenditure on health care has been tentatively estimated at US$6 billion as of 1982, or US$50 per capita. (This amounts to US$60 per beneficiary, because 15% of the population is not covered.) These figures place Brazil ahead of countries at similar stages of development, such as Colombia and Peru. Furthermore, Brazil's health expenditures have consistently and substantially increased in relative terms from 1% of GDP in 1950 to 2.5% in 1975 and 4% in 1981. This compares favorably with Italy's corresponding 6.4% of GDP in 1977 and the United Kingdom's 5.2% in 1979. It is evident, therefore, that Brazil's overall commitment of financial resources to health care is adequate. Additional resources that will be made available through recently increased social security payroll taxes (assuming health retains its approximate share of about one-fourth of total social security funding), plus new resources to be allocated through the Social Investment Fund, FINSOCIAL, appear to ensure that the existing levels of both relative and absolute health financing will be maintained or increased over the next decade. Moreover, the allocation of financial resources to (and within) the health sector—including the federal, state, and municipal levels and INAMPS—is remarkably free of earmarking, a circumstance that substantially improves the potential for adequate resource allocation and resource use.

INAMPS' share of overall health financing has increased greatly over the years—from 13% of public health expenditures in 1949 to an estimated 85% in 1982. The remainder (15% of the total in 1982) is divided among the Ministry of Health, the State Secretariats of Health, and various local governments (especially the largest, financially strongest municipalities). INAMPS' progressively increasing share of overall health care financing has resulted mainly from the agency's ability to share the funds generated by rapidly rising social security payroll taxes at the same time as federal budgets for health care were being reduced. The end result has been to create a situation where any health sector financing plan, to prove workable, must necessarily depend upon INAMPS' willing participation.

In general, the health sector's utilization of financial resources has been poor. A disproportionate share of the financing has been devoted to unwarranted specialized care for a relatively few people, while at the same time public health care services have suffered from a recurrent shortage of the funds needed to cover their expenditures. On top of that, it has been charged that unnecessary medical interventions and outright fraud within the INAMPS services have increased expenditures substantially and offset good possibilities for savings, without affecting the quality or quantity of warranted services.

Manpower

The basic trends in Brazil's health manpower management in recent times have been (1) substantial expansion (partly at the expense of quality) in the numbers of dentists and physicians; these latter now number about 150,000, or one per 800 inhabitants as compared to one per 1,000 inhabitants in the United Kingdom, and there has been a disproportionate increase in the number of specialists as compared to general practitioners; (2) resulting neglect of allied health professionals, especially registered nurses (who numbered only 25,000 in 1980); and (3) an abundance (60,000 to 70,000, most of whom began work in the last decade) of poorly trained nursing auxiliaries.

This pattern of manpower training originated in the 1960s, when the number of medical schools rose from 25 to 73 and the number of medical graduates from less than 1,600 per year to more than 9,000. As a result, large numbers of graduates made their way through the private and public health sector structures in big cities and brought about major changes. These included (1) a massive, haphazard increase in university and other specialized inpatient hospital facilities within the core areas of large cities; (2) a subsequent expansion of these high-cost hospitals' outpatient facilities, further concentrating health services geographically and generating a substantial (and largely unwarranted) demand for pharmaceuticals and services; (3) emergence of a social security health system deeply involved in contracting and financing private physicians and private facilities; (4) an excessive concentration by privately contracted services on specialized, intensive, complex, and expensive care that has substantially increased the costs per patient; (5) evolution of arrangements that make it hard to bring this situation under control—such as procedures that allow the regulators (INAMPS staff members) to "regulate" themselves in their roles as INAMPS contractors; and (6) a trend (originating in physicians' expectation of higher income) toward part-time work for several employers as opposed to full-time work for one agency; this latter trend, combined with consequently diminished chances for personalized physician-patient relationships and with unfulfilled work schedules, has tended to lower physicians' pride as well as their loyalty to particular institutions and beneficiaries, and also to lower their efficiency—and hence to raise the costs of health manpower utilization.

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To sum up, health care in Brazil has developed along three largely independent lines based on different philosophies, objectives, technical standards, and funding levels. The end result has been poor performance by health sector agencies and private health services relative to prevailing needs and the substantial funding provided by the government and private households. In this vein, improved performance would appear to require agreement as to the definition of basic health coverage, as well as the desired priority, objectives, intensity, and cost of such coverage. At the present time, extensive managerial, financial, and manpower resources are being largely wasted, creating a situation that calls for a rationalization of resource use based on planning and adequate operating standards—so as to improve coverage for that share of the population that now receives some coverage and to extend modern health services coverage to the roughly 20 million people who now lack it.

Government Actions

The Government is well aware of these problems and has recently been taking strong and sustained measures to counteract them. Since 1975, the Government has sought to improve the health services' legal framework and organizational structure and to extend coverage. The first objective has been pursued through establishment of a basic legal framework for a national health system under Law No. 6229 (1975), which defines institutional jurisdictions more clearly, and also through reorganization

and consolidation of the social security system.

Pursuit of the second objective (extension of coverage) has involved a wide range of important actions. Among other things, the Government has introduced a primary health care program in Northeast Brazil (*Programa de Interiorização de Acôes de Saúde*—PIASS) that uses auxiliaries as health care providers and has incorporated health components into integrated rural development projects in support of primary rural health care. It has also made INAMPS financing available to PIASS-oriented health facilities in the Northeast. In addition, the Government has established agencies and funds for financing social programs (*Fundo de Apoio Social*—FAS), for producing and marketing basic drugs (*Centese de Medicamentos*—CEME), for improving nutrition (*Programa Nacional de Nutrição*—PRONAN), and for extending the coverage of water and sewerage services (*Programa Nacional de Saneamiento*—PLANASA). All these actions give evidence of a strong and consistent government commitment to the improvement of health.

More recently, the Government has established an interministerial commission for health policy and planning (*Coordenação Interministerial de Planejamento*—CIPLAN). It has also been making a major effort to transform the PIASS program into a comprehensive national primary health care program for rural areas; this expansion effort, which is being jointly financed by INAMPS and SES, places special emphasis on preventive care.

Another new positive development of major importance has been establishment of a Consultative Council for Social Security Health Services (*Conselho Consultivo da Administração de Saúde Previdenciaria*—CONASP). CONASP's reform proposals (officially approved by the Ministry of Welfare and Social Security in September 1982) seek a basic reorientation of INAMPS' activities that will serve as the basis for a major overhaul of the social security health services. The main proposals involve introduction of a referral system; improved supervision, controls, and audits combined with introduction of cost-accounting methods throughout INAMPS; planning and coordination of activities at the state level by committees chaired by the state secretaries of health and including representatives of INAMPS, the Ministry of Health, the State Secretariats of Health, and the private sector; changing INAMPS payments so that they are based on the procedure performed (e.g., gastrectomy, heart surgery, etc.) instead of units of service (e.g., ambulatory consultations, X-ray examinations, laboratory tests, etc.); cofinancing by INAMPS of recurrent primary health care costs paid by the State Secretariats of Health and other public agency services; utilization of public facilities to the fullest extent possible before new private services are contracted; and employment of staff members on a full-time basis at adequate salary levels.

Some of these changes are already being introduced on an experimental basis in Curitiba, the capital of the state of Paraná. Preliminary evaluation indicates that adherence to a referral system has reduced the volume of cases seen at the secondary and tertiary levels from 35% or 40% of those seen at the primary level to less than 15%. It also appears to have reduced the proportion of hospitalizations from 6.5% of all ambulatory visits to 5% (this proportion is 2% in Great Britain). These developments, combined with stricter controls, have already resulted in a savings from reduced laboratory exams and physiotherapy treatments large enough to more than offset increased costs resulting from coverage of larger numbers of beneficiaries at the primary health care level.

This Curitiba pilot project is currently about to enter a second phase (involving participation of the municipality's basic health services network) in which both INAMPS and non-INAMPS beneficiaries are served on an equal basis. This Curitiba model is also being applied in the municipality of Niteroi (state of Rio de Janeiro) via a trilateral agreement between the Ministry of Health, INAMPS, and the municipality; and plans are underway to enact such agreements elsewhere in Brazil. Altogether, these measures seem bound to significantly improve not only INAMPS' performance but also interagency coordination and resource use.

The Federal Government is also taking other

steps to improve health care. Among other things, it has recently established a National Social Fund (FINSOCIAL) with revenues from increased taxes in order to finance expansion of social sector activities. FINSOCIAL, which is administered by the National Economic Development Bank *(Banco Nacional de Desenvolvimento Econômico*—BNDE), receives revenues estimated at US$2 billion per year. In addition, the São Paulo State Government is preparing a health project for São Paulo that is based on a primary health care model. This project seeks to employ the concept of population-based health care (care meeting the health needs of all family members) and to address a number of important health sector policy issues through interagency coordination. With suitable modification, it could be applied in other metropolitan areas.

In sum, INAMPS and the Government are making strong efforts to improve and expand health coverage at lower unit costs. A major reassessment of health care is now underway, and important steps are being taken to help resolve critical health problems in both the rural zones and fast-growing urban areas of Brazil.

A Framework for Improved Coverage

The ultimate objective of health development in Brazil is to extend adequate health coverage of a similar quality and an affordable social cost to all Brazilians, regardless of their ability to pay. The main actions needed for doing this are (1) arriving at a definition of adequate coverage and establishing widely agreed-upon criteria and indicators to measure that coverage; (2) establishing a national health development plan and health sector strategy, based on primary health care priorities, that are geared to particular types of coverage and geographic areas; (3) assigning specific responsibilities to the Federal Government, Ministry of Health, State Secretariats of Health, INAMPS, and municipalities for implementing the national program; and (4) coordinating health development with general economic development, improved nutrition, and basic sanitation.

Defining and Measuring Coverage

It is not possible at present to estimate the degree of adequacy of the health coverage provided to Brazil's population. Among other things, there is no clear definition of what constitutes primary health care, and no agreement on whether such care should be provided through an integrated approach based on the needs of the family (as opposed to more specifically targeted vertical approaches, such as maternal and child health programs or vaccination campaigns). Agreement is needed regarding specific indicators of the adequacy of coverage as well as of thoroughness of coverage (indicators such as the number of home visits to pregnant women by allied health professionals, the number of checkups for well babies and for malnourished or sick babies by particular kinds of health workers, and the level of treatment of chronic disease patients). These indicators, in turn, must be clearly related to unit costs and the number of interventions involved, as well as to the extent of the impact upon the target population's health status.

Both the objectives and indicators of health coverage must be agreed upon by the main health agencies in order to permit establishment of attainable goals and to develop ways of gauging how well agreed-upon programs attain those goals. The primary health care model being developed for the proposed São Paulo project fulfills these requirements—because (1) it defines the health needs of a typical metropolitan urban family and the basic services required to meet those needs (as indicated by population characteristics, morbidity and mortality profiles, and cost/financing parameters) and (2) it is a model designed jointly by the Ministry of Health, INAMPS, the State Secretariat of Health, and the municipality of São Paulo in order to encourage its uniform application by all agencies as well as its future application (with suitable modifications) to other metropolitan areas.

Development Planning

Brazil does not have a national health development plan or health sector strategy with well-defined goals, priorities, and schedules. Development through health components (mostly of integrated rural development projects) seeks to satisfy only local health needs subordinated to agricultural development requirements. As a result, development of health care coverage has been poorly coordinated and has had little or no impact on policies and programs. The Primary Health Care Program for the Northeast (PIASS) constitutes an attempt to plan and implement rural health development, but it exhibits important weaknesses related to its almost exclusive emphasis on maternal and child health care, lack of regard for urban-based support services and referral systems, and disregard of individual states' capabilities and commitments to health development.

It is true that the Government and INAMPS are now engaged in a number of actions that seem destined to substantially improve the equity, effectiveness, and efficiency of health care. Nevertheless, these commendable actions are not based on an agreed consensus regarding national development priorities, objectives, and standards. As a result, they do not specifically address the basic problem of health sector resource use. As all this suggests, specific government action is needed at the highest levels for the purpose of drafting and implementing a national health development plan.

Interagency Coordination

In implementing a national health development plan, specific agency responsibilities must be spelled out. Certain basic parameters already exist to help define such areas of responsibility. These include (1) Government plans for decentralizing decision-making and vesting it in the State Secretariats of Health and the municipalities in accordance with their capabilities; (2) the *de facto* mandates of the State Secretariats of Health and municipalities to provide primary health care and of INAMPS to provide specialized care; (3) INAMPS' paramount financial role; and (4) the planning and coordination powers and capabilities of CIPLAN (the interministerial commission for health policy and planning) regarding overall intersectoral development and of the Ministry of Health regarding health sector development.

These parameters—based on past history, the nation's legal framework, and government plans—strongly suggest suitable specific future allocations of agency responsibilities. In addition, a coordinating mechanism must be established to promote adequate integration of services among the main agencies—so as to ensure the effective use of resources at a time when these are being mobilized on a large scale.

Intersectoral Linkages

Health improvements cannot be made in a vacuum. General economic development and higher incomes, especially among the poor, are prerequisites for better health in the form of improved nutrition and housing. Specific nutrition improvement activities are needed to supplement "health" services, especially so that pregnant and lactating mothers and children can be made more resistant to disease. Basic sanitation (especially safe drinking-water) makes an important contribution to reduction of the morbidity and mortality caused by gastrointestinal and respiratory diseases. Thus, in order for improved health coverage to have an appropriately broad and sustained impact, it must be coordinated with improvements in other health-related fields.

Reorientation of Resources and Education in Health Administration

Reorientation of Resources

Until recently, health resources have been concentrated on provision of progressively more complex hospital-based curative care, to the detriment of a more balanced mix of health promo-

tion and prevention on the one hand and curative interventions, especially at the primary care level, on the other. This state of affairs has characterized not only INAMPS but also the State Secretariats of Health (which finance university and other specialized tertiary care hospitals.) The result has been excessively intense and complex care provided at very high and unwarranted cost.

The desired reorientation of resources toward basic health care could be accomplished most efficiently through programs based on primary health care models such as those employed in São Paulo (for metropolitan areas), by PIASS (for rural areas), and in Minas Gerais (for integrated urban/rural areas). All of these models share certain common characteristics, such as use of standardized techniques to prevent disease, promote health, and treat disease among clearly defined population groups at a relatively low unit cost.

Health Administration Education

Within this context and that of the drive to achieve "health for all by the year 2000," it appears vital to review the present status of health administration education in Brazil.

For purposes of classification, it may be said that there are essentially three types of health administration education programs in Brazil today. What might be referred to as Type 1 consists of programs where the health component predominates and the administrative component is subordinate. Such programs can be found at the schools of public health within the departments or disciplines of hospital administration, sanitary administration, health planning, and so forth. These programs, designed for medical graduates and professionals drawn from the health field (physicians, nurses, dentists, etc.), range from certified programs that are professionally inclined to PhD programs with a strong academic orientation. Programs of this type are well-established in Brazil at the National School of Public Health in Rio de Janeiro and the School of Public Health at São Paulo University.

More recently, departments of community or social medicine at various medical schools have been establishing programs in which health management and planning has been receiving more and more attention. These programs are designed for medical students, medical residents, or graduate students with master's degrees. The São Paulo University Medical School at Ribeirão Prêto has a program that provides a good example of this kind.

Another kind of program, which we can call Type 2, places most of its emphasis on administration. Type 2 programs are generally found at schools of business adminstration, where the health field is considered merely one area for the application of management theories and practices. Such programs can be designed for undergraduate students (seeking degrees in business, public administration, or hospital administration) or for graduate students (seeking master's degrees or doctorates in business or public administration). Examples of such programs in Brazil include the programs at the São Camilo School of Hospital Management and the Getulio Vargas Foundation.

A third kind of program ("Type 3") seeks to balance the emphasis given health with that given administration. Programs of this type can be found at both graduate and undergraduate levels. One example of a Type 3 program is that of the Medical Residency in Health Administration developed since 1975 by the Getulio Vargas Foundation and the *Hospital das Clinicas* of the São Paulo University Medical School. Also, many so-called "continuing education" programs that are oriented to health administration and problem-solving fall into this category—including, within the Brazilian context, important programs offered by associations such as the Paulista Hospital Association and the Center Health Education Technology (*Nucleo de Tecnologia ao Ensino de Saúde*—NUTES) as well as by public agencies such as the Ministry of Health and Social Security system. In this regard, it is interesting to note that the university has given emphasis to educating people for top management positions, while the "continuing education" programs of the health services have de-

voted more attention to preparing people for middle-level (supervisory) and lower-level management positions.

Historically, the Type 1 programs developed first, followed by Type 2 and then Type 3. It is thus important to observe three things. First, there has been a decline in the role played by the schools of public health as they have come to share their once sole responsibility for education in the field of health administration. Second, other academic institutions such as medical schools and schools of business and public administration have come to provide education of this kind. And third, health services organizations are now playing a role in this education process.

The causes of these developments are uncertain, but they could have occurred for either of two reasons. On the one hand, the number of health administrators graduated from the public health schools may have been insufficient to meet the growing demands and needs of the health services (a *quantitative* reason). Or, on the other, the health services management process could require administrators with kinds of knowledge and skill other than those traditionally offered by the schools of public health (a *qualitative* reason).

With these considerations in mind, it is worth reviewing several innovative approaches to education in health administration now being implemented in Brazil. The three described here have been adopted by a traditional school of public health, by a traditional school of business and public administration, and by the Center for Health Education Technology (NUTES) in Rio de Janeiro.

The National School of Public Health's Decentralized Program

In 1975, the National School of Public Health (*Escola Nacional de Saúde Pública*—ENSP) decided to decentralize its public health course that until then had been taught at the former capital of Rio de Janeiro. The aim of this decentralization policy was to meet the growing demand of candidates from other parts of Brazil and also to prepare a critical mass of human resources, within the context of prevailing conditions, for participation in priority programs designed to extend health services coverage at the primary care level.

The resulting decentralized portion of the program, referred to as the Basic Public Health Course, provides an 800-hour workload to be completed in 100 days. This basic course is a prerequisite for the school's Specialization Course that follows, a course offered only in Rio de Janeiro.

Each basic course given in a different locale is the product of a joint effort by the National School of Public Health, the State Secretariat of Health, and a local university—which have formed local consortiums for this purpose. Such consortiums are presently functioning in all but two of the 16 centers where this program is being conducted. Most of the courses have been conducted in Northern and Northeastern Brazil.

In order to bring about this expansion and decentralization, it was necessary to prepare local faculties. Therefore, the National School of Public Health made a great effort to identify, select, and train local faculty members. Many of these were former students at the school, others belonged to the local participating university, and others came from local health services. In all, faculty members from the National School assumed roughly 10% of the workload, those from the local universities assumed some 34%, those from the state secretariats assumed about 25%, and professionals not associated with these institutions assumed about 31%. Fifty-three per cent of all the faculty members came from health services outside the universities.

In relation to faculty qualifications, 58% of the faculty members had completed the national school's specialization course, 28% held a master's degree, and 9% held a doctorate. In terms of demand, there was an average of 2.4 applicants for each student place available.

Table 1 shows the number of applicants for the course, the number of students enrolled, and the number of students who completed the course in the period 1975-1980. In a similar

Table 1. The numbers of applicants for the National School of Public Health's decentralized Basic Public Health Course, the numbers of students enrolled, and the numbers successfully completing the course in the years from 1975 through 1980.

	1975	1976	1977	1978	1979	1980	Total
No. of applicants	244	339	335	609	980	1,672	4,179
No. of students enrolled	142	167	210	299	397	506	1,721
No. of students completing the course	128	161	198	284	381	491	1,643

vein, Table 2 shows the distribution of course graduates by state from 1975 through 1980. Regarding the professional background of these students, over a third (37%) were physicians, 28% were nurses, 10% were dentists, and 10% came from other health professions. Altogether, 85% of the students were drawn from the health field, and 15% came from other fields.

After six years, during which this program provided almost 50 courses and trained over 1,600 students, the following developments could be observed:

- The State Secretariats of Health were showing growing interest in procuring better training for their personnel and participating in such training.
- There was better coordination between the universities and health services involved.
- The states involved were exhibiting a growing capacity to administer and conduct the courses.
- A career for health workers had emerged as a result of the courses.
- Health manpower development structures had appeared within the State Health Secretariats.
- There was an increased number of graduates. In the period 1967-1974 the traditional ENSP course in Rio de Janeiro trained 231 people; while in 1975-1980 the decentralized program trained 1,643.

Table 2. Numbers of decentralized courses given in each state from 1975 through 1980 and the numbers of students successfully completing the course in that period.

State	Number of courses, 1975-1980	Students completing the course in 1975-1980
Bahia	6	191
Rio de Janeiro	8	363
Rio Grande do Sul	6	184
Pará	6	198
Pernambuco	5	159
Amazonas	3	92
Maranhão	3	85
Ceará	3	90
Minas Gerais	2	63
Mato Grosso do Sul	2	59
Paraíba	1	35
Alagoas	1	33
Goiás	1	29
Paraná	1	35
Santa Catarina	1	27
Total	49	1,643

The PROAHSA experience. A second innovative approach has been taken by PROAHSA in São Paulo. PROAHSA, which has received key technical support from the Pan American Health Organization, is part of a network of programs funded by the W.K. Kellogg Foundation.

Emerging in 1975, PROAHSA has provided a potential answer to health administration needs. Its basic aims have been to promote teaching and research in the health administration field and to provide technical assistance in the delivery of health administration services. This program was created as a joint undertaking by the Getulio Vargas Foundation, a traditional school of business and public administration, and the medical university center of São Paulo University.

Some of the underlying concepts that led to the creation and shaping of PROAHSA include the following:

1. It was felt that a need existed for a joint venture by an educational institution and a service institution, so that the two could share responsibility for effectively relating theory and practice.

2. A need also existed for a program that

could relate multiple activities (course work, research, and technical assistance) within the field of health administration education.

3. The basic strategy adopted was that any activity is linked to three different objectives (teaching, research, and delivery of technical services) for the purpose of realizing the program's potential.

4. It was felt that the program should be creative and innovative. Thus, the lack of a single generally accepted model for education in health administration, combined with the differing needs of human resources in this field, resulted in a number of innovative subprograms. One of these is a medical residency in health administration, a full-time two-year program for M.D.'s who have just completed medical school. Another provides intensive courses in health administration tailored to the needs of specific institutions such as the Ministry of Education, Ministry of Health, or social security system. For example, one such course, provided under a contract between PROAHSA and the social security system,, is designed to help implement a plan for the reorientation of medical care in different parts of Brazil.

5. It was felt that the program should have no rigid structure. Therefore, it has not been departmentalized, nor have faculty members been assigned unique responsibilities. As a result, all the faculty members could be involved in a variety of different activities, and internal bureaucracy has been kept to a minimum.

Although the PROAHSA program is deeply involved in preparing people for top management positions, its activities have become increasingly directed toward studies on primary care and extension of coverage. One such recent study was conducted by a faculty member and several graduate students under the sponsorship of the Kellogg Foundation, PAHO, and the Latin American Federation of Medical School Faculties (FEPAFEM). This study, which dealt with 33 innovative projects for the integration of teaching and health services at the primary care level in Latin America, gave detailed attention to the managerial content of those projects.

The NUTES/CLATES experience. NUTES/CLATES (The Center for Health Education Technology/Latin American Center for Educational Technology in Health) has previously directed its attentions toward research, development, and dissemination of teaching materials for students of the health professions, especially medical students. More recently, this center has started to prepare materials for people at the local level, including materials dealing with managerial subjects.

The NUTES/CLATES program in this area, referred to as "Local Service Manager Systems Training," was first applied in the state of Rio Grande do Sul in conjunction with a decentralized public health course given by the National School of Public Health and the new School of Public Health of Rio Grande do Sul affiliated with the State Health Secretariat.

This NUTES/CLATES program provides a basic course in health administration based on a modular approach. That is, each teaching/learning unit is self-sufficient, and each is designed so that it can be self-taught by the student, using programmed instructions. The program has 26 modular units, including one dedicated to epidemiology, one to health planning, three to health unit organization, three to information systems, one to supply management, eight to personnel management, six to financial management, and two to health education.

Each unit is composed of a series of items that illustrate and/or analyze the material to be learned; and for each series of items there is a corresponding series of exercises where the student can demonstrate mastery over the material. Each unit, presented using a case-study methodology and problem-solving techniques, is written so as to correspond as much as possible to the real world from which the student comes.

This program material, which has been reviewed by PROAHSA's faculty, exemplifies a product obtained by sharing responsibility for teaching material—the sharing in this case involving a technical group (NUTES/CLATES), a management school (PROAHSA), and a decentralized program of the National School of Public Health.

Concluding Remarks

As already noted, Brazil does not currently have a clear, specific, official policy relating to health manpower training in the field of administration. Nevertheless, there has been a noteworthy tendency for the various institutions cited here to work together.

In this regard, it should be mentioned that some of these collaborative relationships have been stimulated by a new private nonprofit institution, the Brazilian Association for Collective Health (ABRASCO). Originating through PAHO encouragement, ABRASCO seeks to bring together all the institutions and people interested in the various aspects of collective health.

Likewise, it should be noted that the examples drawn from experiences of the National School of Public Health, PROAHSA, and NUTES/CLATES have certain common features. Each involves the use of innovative approaches; none, by itself, could meet the educational needs of the health sector in the field of administration; and each in its own manner constitutes a noteworthy part of the larger effort to attain "health for all by the year 2000."

SUMMARY

Brazil's health service system includes a private subsector serving about 20% of the population, an official subsector serving about 20% more, and a social security subsector serving another 40%. About 20% of the population lacks health service coverage.

Within this mixed system, health manpower and facilities have been heavily concentrated in metropolitan core areas; and while overall financing of the health sector as of 1982 seemed adequate, a disproportionate share of that financing was being used to provide high-cost and often unnecessary care for a relatively small number of people. This unbalanced situation has been aggravated by a rapid expansion in the numbers of practicing Brazilian physicians and dentists in recent years—an expansion that has promoted massive and haphazard growth of hospital facilities in large cities, part-time employment practices that have lowered physician efficiency and morale, and an excessive concentration within the health system upon specialized, intensive, and complex care. The problem has also been aggravated by the increasing dominance of the social security system (a system which received roughly 85% of all public health funds in 1982) and by that system's tendency to make contracts with the private sector that encourage waste and unnecessary care.

On the positive side, the Government has been aware of these problems and has recently been taking strong measures to counteract them. These measures have included efforts to reorganize and consolidate the social security system, to pass legislation better defining the jurisdictions of particular health sector institutions, and to promote a broad spectrum of actions designed to extend health service coverage.

Within this context, it is worth reviewing current patterns of education in the field of health administration. At present there are essentially three types of health administration education in Brazil—one emphasizing the health component, one emphasizing the administrative component, and one seeking to balance these two elements. Historically, the health-dominated type of health administration education emerged first, followed by the administration-dominated type and then by the more balanced type.

Regarding innovative developments, since 1975 the National School of Public Health in Rio de Janeiro has been working with state health agencies and local universities in many parts of the country for the purpose of decentralizing its basic public health course and giving it in a number of different places. Another program, which has received support and funding from PAHO and the Kellogg Foundation, has promoted teaching and research in health administration and has provided technical assistance to promote the delivery of health administration services. Finally, the Center for Health Education Technology/Latin American Center for Educational Technology in Health has started to prepare educational materials for local residents and has undertaken a program in collaboration with other agencies that is designed to provide a basic course in health administration that can be self-taught by the student, using programmed

instructions. It should be noted, in examining these various innovative programs, that none, by itself, can meet the health sector's needs for education in health administration; but each, in its own way, constitutes a significant part of a larger effort by the Brazilian health system to attain the goal of "health for all by the year 2000."

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