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**AN ECONOMIC ANALYSIS OF
SEGMENTS OF THE PUBLIC HEALTH SECTOR
OF EL SALVADOR**

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EXECUTIVE SUMMARY

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AN OVERVIEW OF THE CAUSES OF THE MOH FINANCIAL CRISIS

Since it peaked in 1977, the Ministry of Health's real per capita expenditure level has dropped by 28 percent (MCPI-based adjustment*). With the exception of two temporary lulls (1980 and 1984) the erosion of the MOH's command over resources has been both monotonic and fairly constant. The impact of this trend has clearly left its mark on the public health care delivery system of El Salvador. The 20-year secular trend of the generally improving health status of the Salvadoran people was broken in 1980, most prominently by war, but also because of a less effectively functioning public health care system—the result, in turn, of an increasingly financially constrained Ministry of Health.

Government reallocations of appropriated monies to fund the costly war coupled with general austerity measures forced on it by a faltering economy were then (in 1979) and remain today primary causes of the falling levels of real monies available to the MOH. Ultimately, these same factors—the war and the economy—can, at least in part, be held accountable for the growing scarcity of supplies in general (and most notably in medicines and drugs) in MOH facilities, which has probably reduced both the effectiveness and the utilization of those facilities from what their levels would otherwise be, in a cumulative and spiraling fashion.

But the war and the economy were not and are not the only culprits. These trends did not begin in 1979. They were evident even a decade ago, well before the war and the economic crisis developed. The war and the faltering economy only served to expedite and exacerbate trends and tendencies that already existed. The more fundamental source of the problems—one that predates both the war and the devastated economy—has been of an institutional nature. More specifically, the sources of problems have been the historical mode of organization and the resource allocation and decision-making processes within the Ministry of Health.

The Ministry of Health has two, largely unrelated health care delivery constellations: one comprises the so-called Centralized Agencies—the health centers, units, and posts; the other consists of the so-called Decentralized (or Autonomous) Agencies, overwhelmingly dominated by the 14 hospitals. Composed, as it were, of two separate systems with physically, administratively, and procedurally independent budgetary processes, the Ministry of Health was not in a position to (i.e., was not institutionally configured in a manner that was conducive to) its being able to effectively take control over its own destiny, let alone to rationalize the allocation of its falling absolute level of resources. Saddled with two different systems with very different needs, and suffering continual and

* The MCPI is a Ministry of Health-specific Medical Care "Price" Index. See Section III for a detailed discussion of the motivation for and construction of the MCPI.

significant reductions in its level of real resource availability, the Ministry simultaneously was being confronted with the ever-increasing recurrent costs generated by the coming online of a (still) rapidly expanding, donor-funded, health infrastructure.

Given this rapidly and (at least in the first years) unpredictably changing situation, the Ministry's long-established practice of historical-based budgeting was a severe limitation. More facilities meant that more personnel were needed. And, as both the war and the economic crisis persisted, the implications of these fundamental institutional shortcomings manifested themselves in the structural-lock of budget extrapolations: in the growing percentage of recurrent costs being spent on personnel at the expense of the growing shortage of supplies, materials, and drugs in the regional health services' facilities.

With these major trends and their causative factors—i.e., the "big picture"—in mind, let us investigate in greater detail the evolution of the current crisis and its implications for public health services delivery in El Salvador.

THE MOH BUDGET, 1975-1986

In the years preceding the civil war, El Salvador's Ministry of Public Health and Social Assistance (MOH) generally enjoyed a climbing absolute level of budgetary support from the Central Government. Between 1975 and 1979, the Ministry's budget nearly doubled in size, growing 79 percent from 82,136,160 colones in 1975 to 147,155,000 colones in 1979. Since 1979, however, annual changes in the current colón level of the Ministry's funding have been erratic, increasing by more than one-quarter in 1980 and by 20 percent in 1984, but holding about constant in 1981 and actually falling in the remaining years—by 1 percent in 1981, by 4 percent in 1982, by 2 percent in 1983, by 8 percent in 1985, and by 5 percent in 1986.

Assessed in terms of its share of the total Central Government budget allocation and controlling for the impact of the growing rate of inflation, however, the pattern of recent developments becomes far less ambiguous and far less optimistic. In 1980, the Ministry of Health was allocated 10.6 percent of the total Central Government budget. By 1986 this proportion had fallen to 7.1 percent. Deflated by a special medical care "price" index developed for the MOH, the MCPI, the Ministry's level of real expenditures fell by 37 percent over the course of this six-year period.

Each December the Ley de Presupuesto—the prospective annual budget of the Central Government of El Salvador—is published. Throughout the course of the year the Ministry of Hacienda "fine tunes" these initial allocations (a) to adjust for relatively minor changes in individual ministerial-level program designs and implementations, but also (and with far more significant and global impacts) to adjust for (b) discrepancies in estimated government revenues and (c) changes in government program priorities. Between 1978 and 1985, such changes resulted in the Central Government's final budget allocations being, on average, 9.6 percent greater than its final allocations. Looking specifically at the Ministry of Health over the last decade, on average this process has augmented the annual MOH allocation by 3.4 percent.

The fluctuation of budgetary allocations over the course of the year is one of the primary factors explaining why most government agencies do not spend all of their

(final) allocations. Another, it appears, is administrative inefficiencies. Between 1976 and 1985, the Ministry of Health consistently outperformed the Central Government of El Salvador (as a whole). Over the course of this 10-year period, the Central Government on average annually spent 92.6 percent of its (ultimately) appropriated monies; while the MOH, on average, spent 94.3 percent of its final allocation.

The Ministry's performance, however, has been inconsistent. It has, on the one hand, a solid annual average record of expending 98.3 percent of its final allocated operating costs budget. On the other hand, however, its capital budget expenditures annually averaged only 76.2 percent.

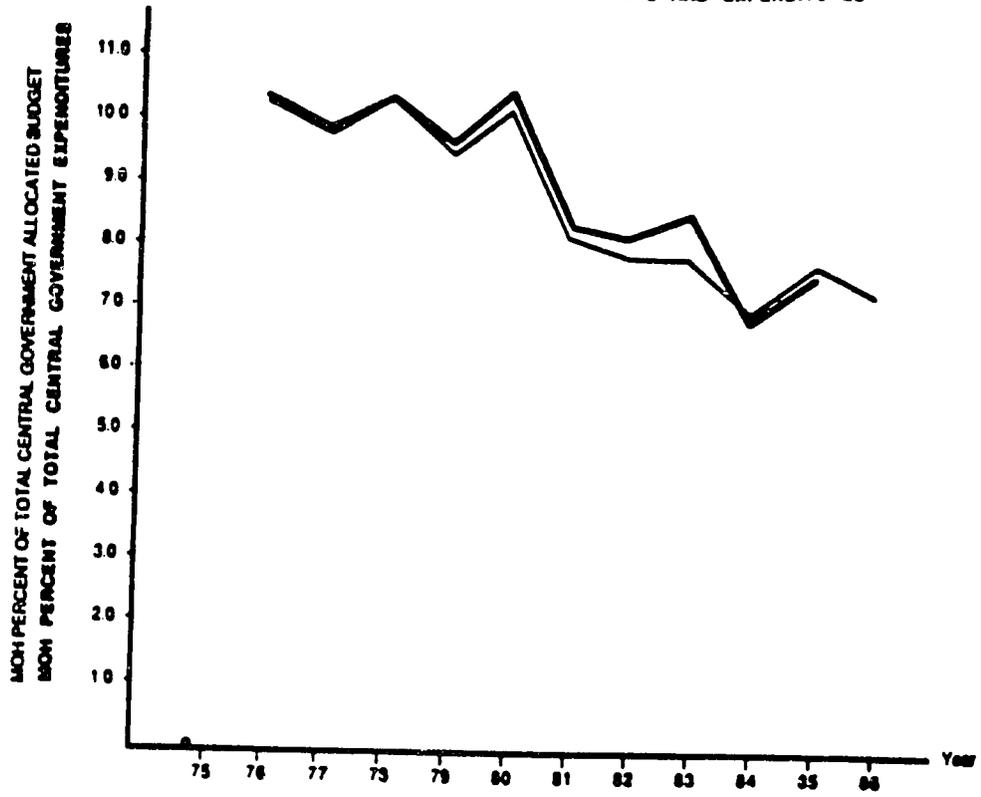
THE MOH'S APPROACH TO "PLANNING": HISTORICAL-BASED BUDGETING

The Ministry of Health's approach to planning and budgeting has been to follow what is referred to as historical-based budgeting. In this process, the previous year's budget serves as the basic resource allocation decision-making tool. Changes in the level of the Ministry of Health's total budgeted monies—both those requested and those received from the Ministry of Hacienda—are generally allocated across the different MOH programs on the basis of the relative shares they received the previous year.

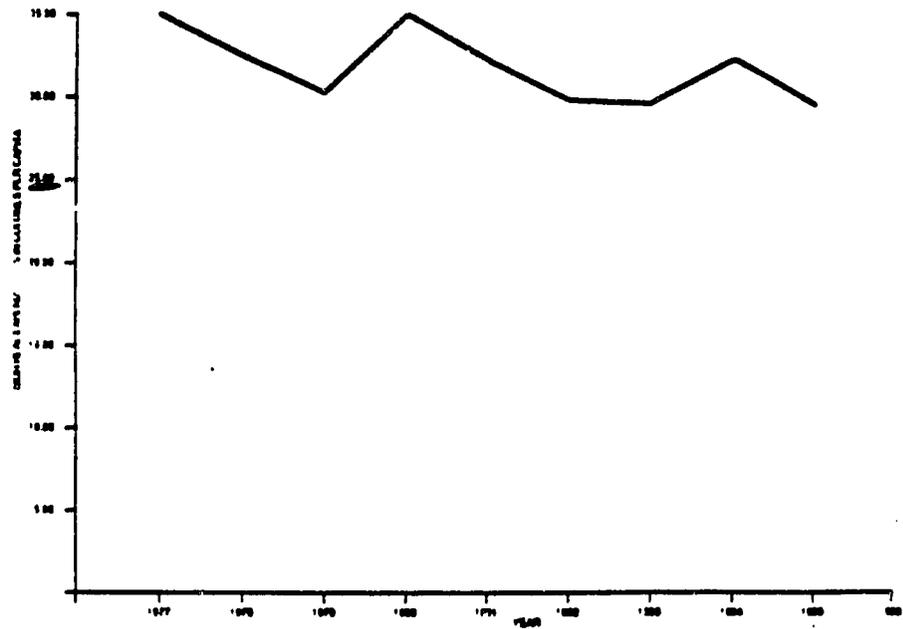
This approach is status quo oriented, and largely inert. New initiatives, being perceived by existing programs and personnel primarily as threats to their own programs and positions, are not encouraged. One manifestation of this is that the MOH's finance/budget department comes to be and remains little more than an accounting department. Planning, to the extent it is undertaken, must be the charge of another section of the Ministry. But planners without budgets are not likely to have a particularly good track record in terms of implementation. They become frustrated and lash out at what they perceive to be the cause of their frustrations—the budgetary section and its immediate supervisors. The result is the sharp and openly antagonistic split between the budget section of the Ministry—and, at a higher level, the entire administrative department—and the programming and planning sections. Remedying this dysfunctional state of affairs will require changing the institutional structure or, at the very least, effectively altering the distribution of power within the Ministry of Health. It is possible that the decentralization process currently underway will accomplish this. Decentralization, at least as envisioned, will result in the coordination of planning and budgeting activities, which is essential if either is to be an effective instrument for allocating resources.

At present, the changes that occur in the structure of relative allocations across programs and consequently across even functional categories (e.g., personnel costs, materials) are largely responses and/or accommodations to initiatives introduced by international donor agencies. Given the level of donor-sponsored activities in El Salvador, such an approach constitutes the wholesale abdication of control of the budget, and concomitantly control of the direction and structural nature of the public health care delivery system. This is the major factor accounting for the growth in the share of the MOH Centralized Agencies' budget allocated to personnel and the concurrent reduction in the share allocated to materials and supplies. This abdication, the role of donor agencies, and the changing composition of the Centralized Agencies' budget are clearly evident in the Interamerican Development Bank (IDB)-sponsored public infrastructure

EVOLUTION OF THE MOH SHARE OF TOTAL CENTRAL GOVERNMENT BUDGET ALLOCATIONS AND EXPENDITURES



EVOLUTION OF MOH REAL PER CAPITA EXPENDITURES, 1977-1988 (1988-ADJUSTED)



project, which will be described in the context of other more generally occurring changes in MOH operations.

CHANGING HEALTH FACILITY "PRODUCTIVITY"

Designed and underwritten by a long-term, IDB-sponsored infrastructure development project, the number of MOH facilities has grown significantly in the last 10 years. The number of total MOH non-hospital medical care facilities increased from 209 in 1975 to 293 in 1980, and reached 344 in 1985. Consistent with the Ministry's programmatic effort to enhance access to and utilization of MOH medical care facilities, most of this growth occurred in the less resource-intensive and more geographically dispersed health units and health posts.

Since 1977, despite the growing numbers of posts and units—both in absolute numbers and relative to other types of facilities—they have accounted for a falling proportion of total MOH-provided medical visits. Together in 1977-1979, they accounted for an annual average of 54.8 percent of all visits to an MOH facility. Between 1980 and 1982, this proportion fell to 51.5 percent; and most recently, between 1983 and 1985, this downward trend continued, falling to 47.8 percent.

There is no definitive evidence about what may have motivated these changes in consumer demand/utilization behavior. There are, however, a number of anecdotal pieces of information, and plausible deductive inferences (based on budgetary analyses) that are consistent with this eight-year trend. It appears that the MOH's relatively constant absolute levels of (nominal) outlays for materials and supplies—in the face of rising prices of materials and supplies, growing numbers of facilities, medical personnel (for the most part, required to staff the expanding infrastructure), and medical care visits—has so significantly reduced the materials and supplies-intensity of the average medical care visit, that the quality of care provided has fallen. Most or many of the people, it is generally believed, who frequent these "lower" levels of care do so primarily to obtain medicines. The single most important manifestation of the growing financial constraint of the MOH for most Salvadorans is the significantly reduced availability of medicines in MOH facilities in general, and particularly in the health units and posts. Having learned firsthand or by word-of-mouth that there are few materials and supplies—and especially drugs—in these facilities, many people (it is hypothesized) are bypassing the lower levels of care, going directly to the centers, or even more commonly to the hospitals. Others, it is speculated, may be opting out of the public system altogether, turning to private providers, or—what seems more likely because of falling income levels—turning to pharmacies, pharmacists, and self-medication.*

* Although the total number of visits to all MOH facilities has not consistently fallen in recent years, there are a number of factors that would suggest that had the quality of services remained unchanged, their utilization would have been expected to have increased rather substantially. See Section V, pages 3-5, for a discussion of these considerations.

These longer-term trends of falling utilization of the posts and (to a lesser extent) the units, have been both expedited and exacerbated by the war and the economy. The war has disrupted life throughout the country, but particularly in relative remote areas—the sites of most of the units and posts. It has made travel more dangerous for both consumers/would-be patients and for providers trying to get to these facilities. It has disrupted schedules and supply lines. It has generated more "business" in the form of war-related casualties, which has meant that less time and materials have been available for "regular" clients. All of these factors—both their actual occurrence and the mere perception of their having likely occurred—would discourage prospective MOH patients from seeking care as often as they otherwise would have done.

CHANGING PATTERNS OF PERSONNEL EXPENDITURES: POSITIONS, SALARIES, AND "PRODUCTIVITY"

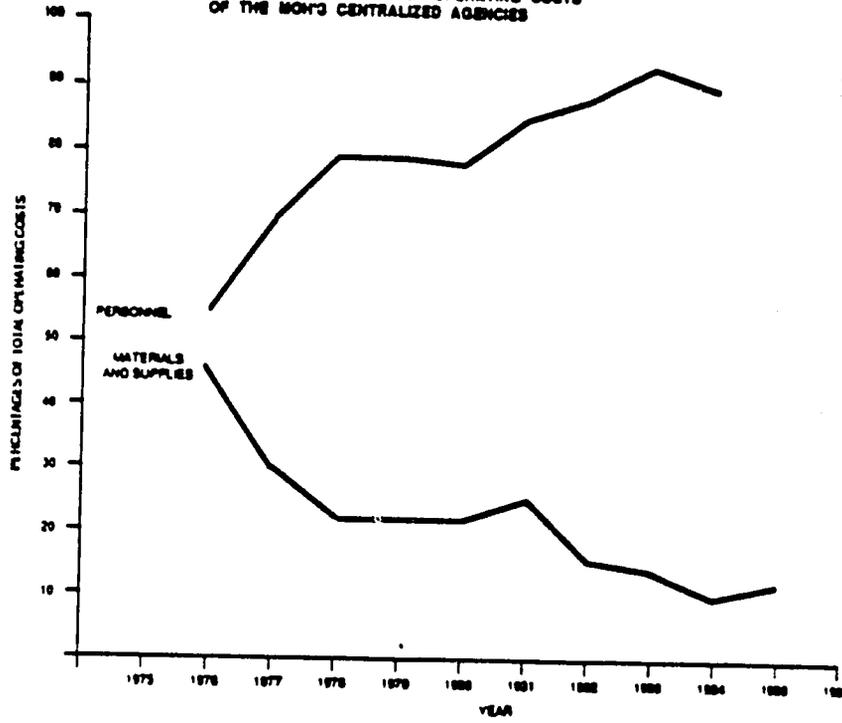
Since 1977 there has been a sustained increase in the proportion of the MOH Centralized Agency budget expended on personnel. This growth has occurred at the expense of the share of the budget allocated to machinery and equipment, and most recently, materials and supplies. In 1977 the relative shares of the total Centralized Agency operating costs spent on personnel vis-a-vis materials and supplies was 55:43. Thereafter through 1984, with only one exception—1981—the trade-off of materials and supplies for personnel was continuous. By 1984, the ratio of these two categories' funding levels grew to about 92:7.

The growth in personnel expenditures can be caused by an increase in the salary levels, an increase in the number of personnel, or some combination thereof. At the start of this period, much of the increase in the personnel costs of the MOH Centralized Agencies was generated by increases in the number of personnel. The rapidly expanding infrastructure alone has been estimated to have accounted for an increase of Centralized Agency personnel (and more specifically, of Regional Health Services personnel) of slightly more than 2,000.

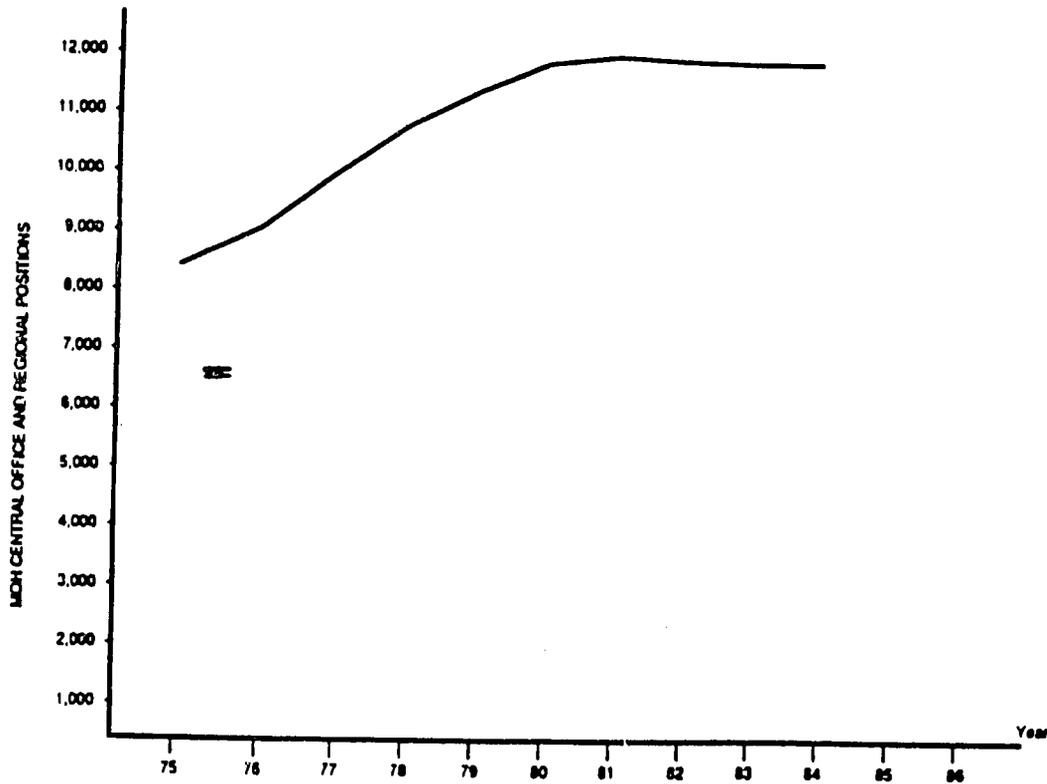
The rate of increase in the number of Centralized Agency personnel (i.e., all MOH employees with the exception of the Decentralized Agencies—which consist primarily of the 14 hospitals) peaked at an annual rate of 6.9 percent in 1977. Thereafter, it followed a generally constant rate of decline, becoming negative in 1982, and has since remained about constant (at about -0.3 percent).^{*} The absolute number of total Centralized Agency personnel (the Regional Health Services and the MOH Central Office—Secretaria de Estado) grew from 9,046 in 1975 to peak in 1981 at 12,716. Focusing specifically on only the Regional Health Services component, personnel grew from 8,517 in 1975 to 11,934 in 1981, and fell slightly to 11,827 in 1984.

* These figures do not include contracted labor or health board (patronato)-funded positions, and thus actually understate the totals.

THE CHANGING COMPOSITION OF OPERATING COSTS
OF THE MOH'S CENTRALIZED AGENCIES



THE GROWTH OF MOH REGIONAL POSITIONS
1975-1985



* Does not include contracted labor or health board positions.

Over the course of the last 10 years, both the absolute and the relative rates of real remuneration of the major types of MOH medical care providers have changed dramatically—especially since 1978.* Physicians, nurses, nurse auxiliaries, and sanitary inspectors have all suffered substantial erosion in the real purchasing power of their MOH-derived incomes. Doctors have fared the worst. Since 1978 part-time physicians, hired exclusively to provide medical care for two hours per day, five days per week (this class constitutes the bulk of MOH physicians), experienced an average annual reduction in their real salary of about 11 percent.

The levels of real income for the nurses, nurse auxiliaries, and sanitary inspectors are not nearly as consistent. Their general erosion has been periodically slowed and occasionally (much more frequently earlier in the decade) the downward trend has been temporarily reversed. Considered as three individual categories of workers, in no year have nurses, nurse auxiliaries, or sanitary inspectors experienced as large a drop in their MOH-derived income as have physicians. The cumulative effect of these trends has been least serious for nurse auxiliaries. As a group, they have experienced a rate of decrease in their real income of about one-fifth the level of doctors. The ratio of doctor to auxiliary salaries has fallen markedly from 1.76 to 0.81 over the 1975 to 1986 period.

Comparing the 1975-1977 average number of full-time equivalents (FTEs) of doctors, nurses, and nurse auxiliaries to their 1982 to 1984 levels, the relative number of physicians has increased, that of nurses has remained about constant, and the number of auxiliaries has decreased.

Not controlling for differences in patient case mix, changes occurring over time in the medical care team division of labor, differences in the quality of care received, or the possibility of changes in the levels of other inputs, the "productivity" of doctors, nurses, and nurse auxiliaries together (as measured by the "output" of medical visits per FTE) fell by 1.8 percent between 1975 and 1984.

Analyzing changes in the "productivity" of each of these personnel categories (and bearing in mind the aforementioned caveats) nurses' productivity increased by 41.4 percent, auxiliaries by 3.6 percent, while that of physicians fell by 15.7 percent. In part these changes in relative productivity are attributable to some modifications in the structure of MOH service delivery.

- o There is an increasing delegation to both auxiliaries and nurses of some duties previously performed only or primarily by doctors. These activities primarily include well-baby clinics, family planning, and other maternal and child health (MCH) services.
- o There is a growth in the number of physicians in administrative positions, as (generally part-time) directors of health centers and units. Between 1975-1978 and 1982-1984, the average number of units increased about 18 percent, from 84 to 99, and the average number of centers increased 50 percent, from eight to 12.

* The Consumer Price Index (CPI), developed by the Central Reserve Bank of El Salvador, was used in the adjustment process. See Appendix A for the CPI.

- o There has been an approximately twofold increase over this time period in the number of personnel composing rural mobile health units. Generally consisting of a physician, a nurse, and less frequently an auxiliary nurse, such teams would be expected to have lower "productivity" because a large proportion of their time is spent in "unproductive" travel. This would reduce overall medical personnel productivity and would suggest that especially nurses relative to doctors had even greater "productivity" gains elsewhere in the MOH system.
- o Relative levels of real remuneration are changing. From 1975 to 1985, the cumulative fall in physicians' real purchasing power totaled 63 percent. Nurse auxiliaries lost the least, about 12 percent. Nurses have had an intermediate experience—having lost 28 percent in real terms. Although this does not help us to understand why the "productivity" of nurses grew nearly 12 times faster than that of auxiliaries between 1975-1977 and 1982-1984, it may be part of the reason for physicians' "productivity" loss: it may have undermined their incentive to work as hard as they had previously. This may also account for the development and implementation of the quota system governing the minimum number of patients per hour a physician is expected/required to treat.

Identification of the specific roles of these various factors and their importance in explaining changes in the relative "productivity" levels of these different MOH provider-types requires additional data and further study.

EASING THE MINISTRY OF HEALTH'S FINANCIAL CONSTRAINT

What is to be done? The development of a new, more flexible and decentralized administrative structure, combined with the adoption of epidemiologically-based and budget-tied health planning capability, both to be facilitated, expedited, and fortified by the adoption of a computer-based management information system, holds great promise. Any one of these measures alone would, if successfully implemented, constitute a major institutional reform. Together they hold the potential for revolutionary improvements in the performance of the public health sector. It is imperative to note that each of these elements is, for the most part, an initiative that the Ministry of Health itself has developed.

Effective implementation of these various measures can do much to make better, more efficient use of available resources. Still, the problem of the level of resources available remains. Given the present level of funding that exists, and the less than savory economic forecasts for the country, the Ministry of Health must investigate, identify, and adopt mechanisms for extending its effective control over resources. Since (as is demonstrated repeatedly throughout this paper) there is little reason to expect predictable and/or increasing absolute levels of resources to be forthcoming from the Central Government, the MOH must look elsewhere.

Particularly given the level of international attention and aid being focused on El Salvador at this time (due to the civil war), donor agencies do hold some promise in this regard—but only in the short term. Given the implicit costs that have been associated with the reliance on donor agencies to date (in terms of their having often and significantly compromised the decision-making authority and institutional cohesiveness of the MOH) and the critical and historical crossroads at which the Ministry presently stands, cultivating further dependence on donor agencies needs to be avoided—at least in the "business as usual" mode. To the extent that the past holds lessons for the future, increasing reliance on donor agencies at this time would heighten the potential that the decision-making authority and/or institutional cohesiveness of the Ministry (such as it presently is) would be (further) compromised. Because these are two of the key institutional problems that the Ministry of Health is presently coming to grips with on its own, the most useful role for donor agencies now and in the near future is to provide the wherewithal to facilitate and expedite the implementation of the various MOH initiatives that have been noted.

But even apart from the need to insulate the institutional redefinition presently underway within the Ministry of Health, it is clear that long-term solutions cannot be built on the expectation that donor agency monies will always be available and forthcoming. Such monies are driven by political considerations, and as such are volatile. Therefore, in the long run public health care in El Salvador must be predicated on a better managed, more fiscally sound, and more financially independent national system. But how to construct one?

In the course of the analysis of the MOH's operations over the past decade a number of efficiency-related issues were raised. (1) Is the division of labor between physicians, nurses, and auxiliaries optimal? If not, how might it be improved? What are the political considerations and implications? What are the health manpower considerations and implications? (2) Is the bypass phenomenon widespread? (3) What factors contribute to bypass? And, more generally, (4) what types of factors enter in Salvadorans' decisions to seek care from a particular type of provider or facility? How important is the money price? The time price associated with obtaining care (the time to travel to the facility, the time waiting at the facility before receiving care)? The availability of drugs? (5) Drug-related issues: Are there too few drugs in the MOH system? When drugs are available do too many get prescribed to the typical patient? How much of the MOH budget should be allocated to drugs vis-a-vis personnel? (6) Does the MOH have too many facilities? (7) What role do donor agency activities play? How do they perceive themselves and the MOH? How do they affect the provision of services by the MOH? (8) What can be done to enhance the effective implementation of health planning in the process of decentralization? (9) How do MOH providers view their role? What are their most troubling problems as MOH employees and providers? What are the most positive points of being an MOH employee/provider? How do they think their effectiveness could be enhanced? Are their patients generally satisfied with the care they receive? What are the most common service-related complaints they hear?

Although the findings related to these issues were not definitive, they served to indicate specific informational voids that need to be addressed. Before adequately informed policy decisions can be made concerning these efficiency issues, studies designed to gather this critical but missing data must be conducted. Several basic surveys are in order: a household health interview

survey, a provider opinion survey, a survey of PVO and donor agency activities, and a time-motion study in each type of MOH facility.

The lack of systematic knowledge about the health care system of El Salvador is a problem that plagues any effort to develop recommendations about public health financing. To forestall the further deterioration in the quality of its services, its physical facilities, and, consequently, its reputation, the Ministry of Health needs to act now—even on the basis of only partial information. Systematic studies must be undertaken now to provide baseline data as well as feedback on the effects of some of the measures suggested below that cannot be postponed.

Salvadorans are already paying substantial user fees for the services they receive from the MOH. The combined totals annually raised in the health centers, units, and posts, constitute 7 percent of the annual general-budget-funded expenditures for these services. At present, these revenues are under local control. The community health boards (patronatos), established by law (in ca. 1947), oversee and direct the control of these funds. Each individual health facility—each center, unit, and post—is mandated by law to have a patronato.

It is clear, however, that what has been decreed by law, and what has actually come to be, are quite different in the case of the patronatos. Many units and posts do not have a community health board, or at least do not have a functioning board. In addition, from interviews with the directors of health facilities, it is evident that the director of the local health facility enjoys considerable discretion in determining how to spend the money. The patronato provides more of a clearinghouse and monitoring service.

The monies raised from user fees are augmented by the proceeds of various fund-raising activities sponsored by, and philanthropic contributions made to, the community health boards. From 1982 through 1985, user fee revenues on average constituted about 80 percent of the total of the patronato-directed funds, the other two sources making up the remaining 20 percent. The trend over the last 10 years has been for the level of revenues generated from the "voluntary" one- to two-colón user fee contribution to increase. Between 1978 and 1985, the expenditures of patronato-directed funds doubled.

Historically these monies have been used primarily to pay for additional workers and drugs. Since 1983, however, a rapidly increasing proportion of the expenditures has been shifted to medicines. As the share expended on medicines has expanded, both the absolute and relative number of additional workers hired with the patronato-directed funds has fallen, indicating the local provider perception of both the importance of medicines and the scarcity of MOH-provided medicines at the regional health services levels. From interviews with health center directors, it was learned that about 80 percent of the patronato-directed funds are presently being used to purchase medicines.

The hospitals too are required by law to have patronatos. The hospitals also have a "voluntary" contribution. In addition, they charge for a wider variety of goods and services, including the provision of pensiones—higher-quality room and board services. From the combination of these two revenue sources the hospitals together generate additional monies that are approximately equal to 2 percent of their annual general-budget-funded expenditures.

Despite these major local initiatives to accommodate to financial constraints, MOH services remain severely crippled by the lack of resources. It is therefore recommended that the structure of user fees be formalized, standardized, and the level increased to three colones. It is imperative that the (additional) revenues generated remain under local control in order to retain incentives of consumers to pay the fees and to retain the incentives of providers to collect the fees. The pensiones user fee rates should be increased, as well.

Given the importance of medicines and drugs to the provision of modern medical care in general—and specifically to Salvadorans—on the one hand, and their increasing scarcity at MOH facilities on the other, it is recommended that the MOH institute a drug-specific, full cost recovery program. Where they are effectively functioning, the patronatos could serve as the institutional mechanism for implementing this scheme. The specific logistics whereby the MOH Central Office, or alternatively the Regional Offices, could serve as clearinghouse—single purchase agents (to enable exploiting quantity discounts) still need to be examined. This is a priority.

Another priority study is to determine whether or not there are any private sector management corporations that might be hired to oversee the operations of one of the hospitals. If some interest is indicated, it is recommended that one of the MOH hospitals be so managed on a multiple year, pilot study basis.

An additional study of the Social Security Institute—Ministry of Health working agreement is warranted. Methods to expedite the planned increase in coordination and cooperation must be sought. In addition, more fundamental restructuring and integration of these two public entities (as well as those of ANTEL and Bienestar Magisterial) should be explored.

Finally, there should be a moratorium on all new facility construction. The Ministry's inability to meet the recurrent operating costs of the present infrastructure has meant that both the quality of MOH services and the integrity of its present facilities have been compromised. The lack of funds for adequate supplies of drugs, materials, and equipment has debased the quality of MOH medical care services. The shortage of maintenance and repair funds has contributed to the premature depreciation of capital investments—buildings, machinery, and equipment alike. Continued infrastructural development will only serve to exacerbate these problems, and undermine the effectiveness, the long-term financial viability, and the credibility of the Ministry of Health. New facility construction—regardless of the source of funds or terms of financing—should not be pursued.

SECTION ONE

THE ECONOMIC CONTEXT: A BRIEF OVERVIEW

L. THE ECONOMIC CONTEXT: A BRIEF OVERVIEW

A. A THUMBNAIL SKETCH OF THE POST-WORLD WAR II ECONOMIC DEVELOPMENT OF EL SALVADOR

(1) Economic Growth And Transformation

From 1950 until 1979, El Salvador enjoyed an unprecedented period of high and relatively uninterrupted economic growth. Its annual rate of Gross Domestic Product (GDP) growth averaged more than 5 percent, the highest of the Central American Republics (Perez-Brignoli 1983, p.366).

Until the 1970s, a significant portion of this performance was attributable to propitious international economic conditions (viz., increased foreign demand for the country's traditional exports, coupled with relatively high and stable prices—especially for coffee). But other factors, including substantial structural changes, were important as well. The tendency toward the expansion and modernization of agriculture started in the 1950s and gained strength throughout the 1960s. The agro-export sector became increasingly diversified as first cotton and sugar, and later (with a less pronounced impact) cattle production boomed.

In addition, starting in 1962, and fostered by the formation of the Central American Common Market (CACM) that year, there was a surge in industrialization in El Salvador. From 1945 to 1978, the share of manufacturing in GDP grew from 11.4 percent to 18.7 percent (ECLA 1980, p.70). The incentives provided by the structure of the CACM, however, encouraged the proliferation of industry that generally was not able to compete internationally beyond the confines of that union (Cline and Delgado 1978). Hence, the initial rapid rate of growth in manufacturing output peaked and began to fall even before the end of the 1960s (Rosenthal 1978, p.51).

Moreover, in part because the Government directly subsidized the adoption of highly capital-intensive techniques of production, the growth of manufacturing output did not contribute commensurately to the growth in employment. Manufacturing employment grew from 11.4 percent of the economically active population in 1950 to 12.8 percent in 1961, and then fell to 9.8 percent in 1971 (Perez-Brignoli 1983, p.385). Nevertheless, El Salvador's industrial sector continued to record significant advances: the absolute levels of manufacturing continued to increase, and the fundamental nature of the manufacturing sector became increasingly characterized more by large, modern, automated plants, and less by small-scale, artisanal-handicraft enterprises.

A rapid population growth rate, exceeding the rate of manufacturing employment generation, meant larger absolute and relative numbers of persons were, perforce, entering the agricultural and services sectors. While El Salvador has developed substantial industry in the last 25 years, much of the sector's activities remain ultimately in agriculture; for instance, in the processing of agricultural products—such as the drying, roasting, grinding, and packaging of coffee. By 1970, 26.4 percent of the GDP was still based on agriculture. As of 1980, this share had not changed appreciably (see, for example, various issues of the Banco Central de Reserva's Revista Trimestrial).

(2) The Distribution Of Income

The distribution of income in El Salvador has historically been determined primarily by its distribution of wealth; most importantly the distribution of land. From the end of World War II until the Agrarian Reform of 1980, the distribution of landholding was highly skewed, and relatively unchanging. In 1971, 86.7 percent of all landholdings consisted of holdings less than seven hectares in size, which together accounted for only 19.5 percent of all agricultural land (Ruhl 1984, p.42). By 1975, such holdings accounted for 93.7 percent of the total (Samaniego 1980, p.135). On the other end of the spectrum, in 1971, a mere 0.7 percent of all farms owned 38.7 percent of all agricultural land.

Cognizance of the marked degree of inequality in pre-1979 El Salvador is essential to understanding the economic and social roots of the hostilities that developed into a full-scale civil war in 1979. Looking more closely at the dynamic of the agricultural sector in the pre-1979 era provides valuable insights into the economic roots of El Salvador's current imbroglio. The portrait herein developed will be painted with a broad brush.

We start with a relatively small and only slowly growing industrial sector, with relatively little job generation. To this we add a rapidly growing population on a relatively small and fixed amount of inequitably distributed land. Finally, we add the process of agricultural modernization (primarily in cotton, but also in sugarcane and coffee), a process that generated growing amounts of both output and income, but that was increasingly oriented toward the external sector.

Agricultural modernization led to increasing land values and prompted a more economic use (i.e., the rationalization of the use) of land. As this process proceeded in the 1960s and 1970s, the theretofore still widespread traditional sharecropping and colono arrangements were increasingly abandoned as uneconomic. As wage labor replaced these more traditional forms of remuneration, access to land was increasingly restricted to landowners.

By the early 1970s rural families were estimated to be roughly 40 percent of the national population. The result of agricultural modernization and the increasing reliance on wage labor was to rapidly transform a growing absolute and relative number of them into campesinos without any land and increasingly without any access to land. Dating from the early 1960s, and accelerating over time until the outbreak of war in 1979, the rate of growth of landless rural families was very rapid; from 15.6 percent in 1961, to 26 percent in 1970, to 40.9 percent in 1975, and reaching about 60 percent in 1980 (Baloyra 1983, pp. 302-303; World Bank 1978, p.175; Samaniego 1980, p.135; Deere 1982, p.3).

We have then approximately 40 percent of the entire Salvadoran population living in rural areas, about 60 percent of whom (i.e., about one-quarter of the entire population of El Salvador) consisted of landless rural families.

As the process of agricultural modernization proceeded, the amount of land planted to food crops as opposed to agri-export/cash crops (coffee, sugarcane, and cotton) fell. Between 1948 and 1952 the average amount of land planted to food crops in El Salvador was 58 percent. By 1974-1976, that average had fallen to slightly less than 50 percent. As cattle production grew by about 1 percent per

year between 1960-1964 and 1970-1974, per capita beef consumption fell by 37.5 percent; from eight kilograms per person per year to about five kilograms (Valdes and Nores 1978, p.6).

The end result of following the agro-export model of growth within the structural/institutional limits set by El Salvador's distribution of wealth meant the growing disenfranchisement of a large segment of Salvadoran society. This was made most clearly evident by the health status of Salvadoran children. Nearly 75 percent of all Salvadorans less than five years of age were estimated to be malnourished by the early 1970s, and the situation was rapidly deteriorating. The number of malnourished children had doubled between the mid 1960s and the mid 1970s (PAHO 1976, p.34; PAHO 1978, p.8).

In short, despite a very respectable macroeconomic performance, the economy of El Salvador was increasingly geared to producing for export, and increasingly at the direct expense of the rural population. The persistently rapid rate of population growth, the slow rate of growth of relatively well-paying jobs, and the growing economic disenfranchisement of a large fraction of the population resulted in spiraling political violence throughout the 1970s.*

B. THE IMPACT OF THE CIVIL WAR**

The war and the reforms it prompted Salvadorans to make, and the reforms it prompted the United States to urge Salvadorans to make, have permanently altered the economic landscape of El Salvador.*** In the industrial sector, the output of the manufacturing sector fell by 30 percent between 1979 and 1982. Manufacturing employment fell dramatically, but by somewhat less—about 18 percent. In part this was the result of destroyed and sabotaged manufacturing establishments, but it was also demand related. The war sounded what appears to have been the death knell of the CACM—which was already reeling from the revolution in Nicaragua. The CACM (as already noted) spawned the growth of industry in El Salvador, much of which was uncompetitive internationally, but which could flourish within the limited confines of the CACM. The demise of the CACM has eliminated the largest market, especially for these segments of Salvadoran manufacturing. This sharp fall in demand has triggered a sharp reduction in the need to produce goods, which in turn has resulted in layoffs, which further reduce already lower income levels. Lower income levels have

* See the post-1975 issues of Estudios Centroamericanos, Jose Simeon Canas Central American University, San Salvador, for sound and specific documentation.

** This section is not intended to be an accounting of the economy's performance, nor of the economic reforms instituted since 1979. It is intended to simply provide a basic feel for the magnitude of the major structural changes that have been implemented, and the economic uncertainties that remain. It is based almost exclusively on the World Bank November 15, 1985, document, El Salvador: Country Economic Memorandum.

*** Probably the most conspicuous of the U.S. initiatives has been Phase III of the Agrarian Reform, the so-called "Land to the Tiller" program.

further depressed demand and have thereby completed a vicious, self-reinforcing, low-level "equilibrium" cycle.

More importantly, both now and for El Salvador's future, many businesses fearing destruction, lower demand, increasing unavailability of input supplies (especially imported ones), and in some cases nationalization, have liquidated what they could and have taken whatever possible out of the country to safer havens. In an effort to stem capital flight, the Government nationalized the banks. Here too is another vicious cycle. One reason businesses will not invest is that they fear nationalization and/or other increased government interferences in the market. On the other hand, inadequate private investment has prompted the Government to become more "active" (interventionist) in the economy.

The prognosis for increased private investment and particularly for increased foreign direct investment is for the most part dismal. The political situation remains unstable and the public infrastructure has been devastated to the tune of nearly 1.5 billion colones.

The agricultural sector too has changed markedly. It has witnessed the implementation of Phase I of the Agrarian Reform. This resulted in the nationalization of all farms larger than 350 hectares; a total of 469 properties, incorporating 220,000 hectares (approximately 15 percent of total agricultural land). Agricultural cooperatives were organized on these properties. The 317 cooperatives consist of 31,500 members (households), or roughly 185,000 individuals—about 8 percent of the entire rural population, who had previously worked the land as hired wage laborers, sharecroppers, or renters.

Phase II of the Agrarian Reform remains unimplemented as of July 1986. Phase III, too, has been only partially implemented to date, and was bogged down in administrative procedures (The Agrarian Reform Financing Project Paper, 519-0307m 1986).

Much of the war has been fought in the former cotton growing regions. Cotton production, not surprisingly, has fallen markedly. But so too have the production levels of the other traditional agro-exports, coffee and sugar. The output levels of these crops are not expected to regain their pre-1979 levels in the near future. For its part, the Government has attempted to bring both stability and predictability to the agricultural sector, as well as to direct the crop mix by establishing an agricultural (monopoly) marketing board. The board, known by its acronym IRA, sets the prices of agricultural output and has exclusive rights to purchasing large farms' outputs.

The Government has also established a state monopoly on foreign trade. This, like the nationalization of the banks, is intended to stem capital flight. It is also intended, however, to give the Government more power to effectively deal with the foreign debt and foreign exchange problems, which are (and will remain by all accounts) problems of crisis proportions throughout the near future.

The economic decline bottomed out in 1982. Economic growth resumed (at a 0.8 percent rate) in 1983, and has been slowly picking up since then. AID/ES economists are predicting a 2 percent real growth rate for 1986. Growing levels of per capita consumption, however, are not expected (according to World Bank estimates) to be achieved until at least the 1990s.

SECTION TWO
THE MINISTRY OF HEALTH: PRELIMINARY CONSIDERATIONS

II. THE MINISTRY OF HEALTH: PRELIMINARY CONSIDERATIONS

The physical structure of the Ministry of Public Health and Social Assistance is adequately described elsewhere—both in the reports of other team members, as well as in the numerous project papers, pre-project papers, and evaluation reports that have been conducted in the past five years in El Salvador. The description of that system, therefore, will be limited in this paper to those segments relevant for understanding the MOH's resource allocation process and its implications for public health service delivery. It is useful to begin this discussion with a brief description of that portion of the administrative apparatus that is charged with carrying out the budget-related duties of the Ministry.

The Ministry of Health is divided into two unintegrated organizational entities. The State Secretariat (or Central Office) and the Regional Health Services together constitute what is referred to as the Centralized Agencies. The 14 hospitals and a handful of other (financially less important) agencies are grouped into the other major category, the Decentralized (or Autonomous) Agencies.

The Autonomous Agencies' label is an accurate one: these organizations independently plan their own activities, independently submit and execute their own budgets, and independently compile and submit their program statistics. They are creatures of the MOH in name only, although their annual budgetary requests, the so-called "Anteproyectos Presupuestarios de los Hospitales," are submitted to the Ministry of Health's Financial Accounting Office so that their requests may be "integrated" (arithmetically summed would be more accurate) with those of the "other half" of the MOH.

Even the program categories of the hospitals are different from those of the rest of the MOH, and in most documents that itemize the MOH budget, the hospitals' budgets are generally not disaggregated. Instead, their entire budget—on an institution-specific basis—is reported under the budgetary rubric "current transfers." It is not possible to obtain current information on the individual hospitals' budgetary expenditures at the MOH Central Office. The most recent that may be had are the two-year data presented in the aforementioned "Anteproyectos Presupuestarios de los Hospitales." The only place to acquire current (or even the previous year's) data about the hospitals beyond their total "current transfer" is from each of the separate institutions. The unavailability of such basic information about the hospitals is a manifestation of their independence, underscoring the fact that they are part of the MOH only for purposes of the general budgetary allocation process.*

* There is one exception however, which is generally overlooked. The hospitals receive not only their total current transfers "off the top" of the MOH budget, but, in addition, receive a substantial portion (about one-half) of all of the Ministry's supplies and materials (budget program code 1.029). This common oversight means that the estimates have been underestimated. The issue of the relative funding levels of the hospitals vis-à-vis all other MOH facilities (i.e., versus the Regional Health Services—the health centers, units, and posts) is an important efficiency discussed in Appendix F.

Historically, the hospitals existed as independent entities totally apart from the MOH structure until the mid 1960s. That "union," however, was to be only a temporary one. In (approximately) 1969, they became independent organizational entities in their own right again; only to be "re-merged" with the Ministry in the early 1970s. This on again-off again policy reflects the organizational problem that the hospitals have long been and still are for the Ministry of Health. Nobody, it seems, has been able to figure out what to do with the hospitals. Even in organograms of the Ministry, the hospitals, which are regularly allocated and spend somewhat more than half of the entire Ministry of Health's budget, are nowhere to be found, or are entered with nondescript hashed lines connecting them directly to the Minister's office.

SECTION THREE
THE MINISTRY OF HEALTH'S BUDGET: 1975-1986

III. THE MINISTRY OF HEALTH'S BUDGET: 1975-1986

There is no single best measure to indicate the Ministry of Health's financial well-being. It is appropriate, therefore, to develop several indicators and to explicitly discuss the advantages, insights, and shortcomings of each. In addition, to fully appreciate and understand both Central Government and MOH policies, as well as the evolving institutional structures and changing programmatic emphases, it is essential to establish some reference points and be aware of major trends. This requires reviewing MOH activities over a relatively long period of time. Taking a historical view has the added advantage of (simultaneously) enabling detection of major but temporary swings in the behavior of particular measures. The "smoothing out" of such aberrations provides a more accurate and balanced view of the nature and workings of the system.

A. THE MOH BUDGET ALLOCATION RECORD—IN NOMINAL COLONES

Measured in current colones, the absolute level of the MOH budget allocation increased almost continuously between 1975 and 1981 (see Exhibit I) at an average of 32.7 percent. Since 1981, its magnitude has been less predictable. After falling slightly in 1982 and 1983, it increased dramatically but only temporarily (by 20 percent) in 1984, only to resume its steady decline at about a 6 percent annual rate in the last two years (1985 and 1986).

On a theoretical level, the level of funding of any government agency is likely to be affected by a variety of factors; some social, some political, some economic. For now, the discussion will focus on the influence of the latter. The general level of both expected and actual government revenues is likely to affect the amount of funding government officials are likely to regard as appropriate and affordable. Hence, the level of the Central Government's total tax revenues is a relevant relative measure to examine. In effect, it serves as an indicator of the Government's income, or what may be viewed as its ability to pay for health services.*

Viewed within this framework, the MOH's evolving financial situation looks significantly different than mere inspection of the absolute numbers of colones leads one to believe. The Ministry's budget as a percent of the total Central Government's budget between 1976 and 1986 is presented in Exhibit II. While marked by periodic reversals, there is a distinctly decreasing secular trend.

Initially this finding is disturbing. However, this negative trend need not necessarily be cause for distress. It is possible, for instance, if the Government's total participation in the economy is either growing or remaining constant, that a

* This obviously is an oversimplification. It ignores the possibility of deficit financing. Nevertheless, given El Salvador's long record of "fiscal conservation" or "fiscal restraint," and its present relatively low capacity for financing (further) financial deficits, the degree of oversimplification is not as great as might at first appear to be the case.

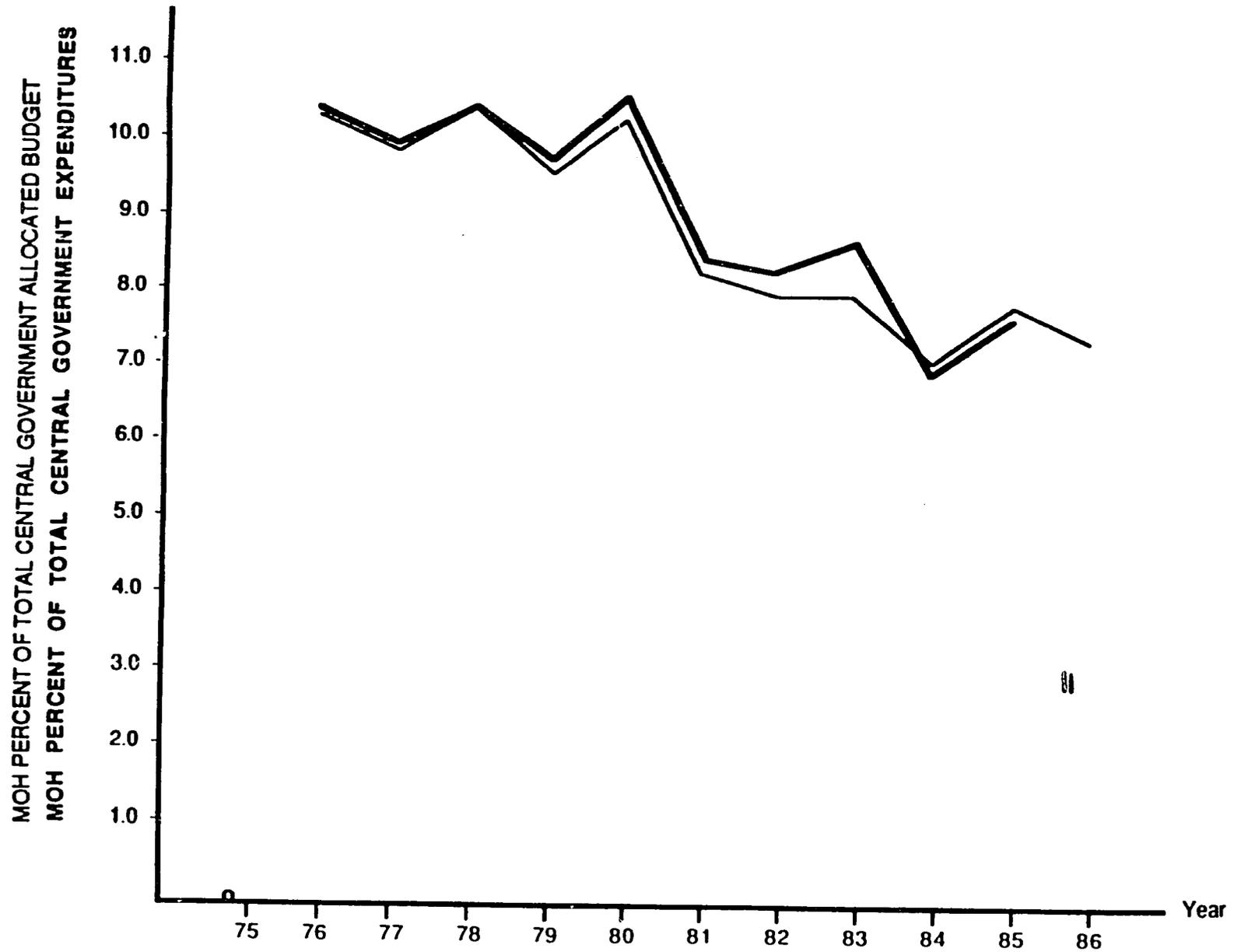
EXHIBIT I
MINISTRY OF HEALTH BUDGET ALLOCATIONS
(IN CURRENT COLONES)

<u>YEARS</u>	<u>TOTAL (FINAL) BUDGET ALLOCATIONS</u>	<u>OPERATIONS BUDGET</u>	<u>CAPITAL BUDGET</u>
1975	82.196.160	68.684.710	13.511.450
1976	111.269.600	84.547.000	26.722.600
1977	128.287.862	98.731.400	29.556.500
1978	148.504.300	112.879.300	35.625.000
1979	147.155.000	125.695.000	21.460.000
1980	186.396.000	151.479.000	34.917.000
1981	187.972.900	160.360.000	27.612.900
1982	180.546.400	151.846.400	28.700.000
1983	177.822.600	145.821.600	32.001.000
1984	213.891.500	157.965.000	55.926.500
1985	197.532.900	164.601.700	32.931.200
1986	186.888.160	170.876.750	16.011.430

Source: Informe Complementario Constitucional sobre la Hacienda Pública, Ejercicio Fiscal, various years; Diario Oficial Tomo No.289, No.243, Dic. 21, 1985.

EXHIBIT II

EVOLUTION OF THE MOH SHARE OF TOTAL CENTRAL
GOVERNMENT BUDGET ALLOCATIONS AND EXPENDITURES



negative trend in the MOH's share of the Central Government pie might still be accompanied by an increasing absolute number of colones flowing to the MOH. This in fact is the case in El Salvador, as Exhibit I indicates.

A second factor complicates the relationship between an economy's level of output and the Government's level of revenues. This second complication stems from how the economy's performance is measured. A growing economy is characterized by generally increasing levels of output of a wide variety of goods and services that have individually growing (and some may even be experiencing falling) output levels. A common denominator must be selected to permit comparisons of the differential rates of increase in output, in order to be able to arrive at a generalization about the economy's overall or general level of output or performance. Money is the common denominator used.

Money, however, has a (frequently serious) shortcoming in this regard. Over time, the value of money is subject to change; in effect, the yardstick we are using to calibrate economic performance is changing in length. To the extent that the value of money is changing, it systematically biases the measure of the changing level of real output, i.e., of the volume of goods and services being produced. If over time the value of money—that is, its purchasing power—is increasing, a single colón will be able to purchase more goods and services. Unadjusted, the colón-measured output level would then be underestimated over time: more goods and services could be produced, even though the colón value of all of those goods and services together (aggregated) could be constant, or even decreasing.

Turning the relationship around and looking at the more commonly experienced and hence more intuitive situation, when the value of the colón continually falls over time, the same level of goods and services (i.e., the same real output level) requires more colones to purchase. In this instance, the unadjusted colón-valued output overstates the true level of output, because it takes more colones to purchase the same amount of goods and services. The additional colones required suggest an increase in value, and therefore in output. But, in fact, such, may not be the case. What has changed, instead, is the value of the currency.

To accurately assess the performance of the economy, therefore, and simultaneously to accurately assess changes in the ability of the Government's changing levels of tax revenues to purchase goods and services, it is necessary to take into account the changing value of the monetary unit. This requires accounting for changes in its purchasing power, and this, in turn, requires constructing a price index.

A variety of price indices can be computed. Which is the "best" one depends on the purpose of the analysis being conducted. The most common price index is the so-called "consumer price index," or CPI. It is usually used as a measure of the general level of inflation as it affects the average consumer. The CPI is developed from pricing a set bundle of goods and services that are selected as representative of the "average" bundle of goods and services purchased by the "average" individual consumer, and weighted by their level of importance in the consumer's budget or annual expenditures. By measuring the monetary value of the same goods and services over time, it is possible to identify the extent to which the prices of these particular goods and services—and, by simple extension, the change in the general price level (i.e., the general inflation rate)—is inferred.

Price indices in general have numerous shortcomings. For example, they erroneously overstate the cost of living because of the tendency of consumers to substitute away from goods and services with the most rapidly rising prices (i.e., to buy cheaper goods and services in their place). Another problem, which is particularly relevant to medical care, is that price indices generally tend to understate price changes because they do not (without modification) reflect quality changes or new products.*

For the average consumer, the CPI is the appropriate index by which to adjust money prices to determine changes in the real purchasing power of his or her income. The prices of goods and services that are not adjusted over time are referred to as "money prices," or as being measured in "nominal" or "current" colones. Prices that are adjusted so as to take into account the changing value of money over time are referred to as being measured in "constant" or "real" colones. In making the actual adjustment, a particular year—termed the base year—must be selected to serve as the benchmark year to which the value of the monetary unit (the colón) in all other years is adjusted. The greater the level of inflation (or deflation) in an economy, the greater the disparities between real and nominal colones.

Exhibit III presents the nominal colones. Exhibit IV contains the real or constant colones level of expenditures of the Ministry of Health over the course of the last decade, based on the CPI adjustment.**

Relative to the current-colones picture of Exhibit I, a strikingly different account emerges in Exhibit IV. Rather than the initial, generally consistent six-year climb in the MOH's budget between 1975 and 1981, the CPI adjustment reveals that the MOH's real command over resources (i.e., its ability to buy goods and services) peaked in 1977. With the exceptions of a 7 percent increase in 1980 and a tiny 0.7 percent increase in 1984, the real purchasing power of the MOH's budget has suffered continual and significant erosion throughout the last decade.

B. ACCOUNTING FOR THE IMPACT OF INFLATION: CONSTRUCTION OF AN MOH CENTRALIZED AGENCY EXPENDITURES MEDICAL CARE "PRICE" INDEX

In 1985, if we judge by the CPI, the Ministry was able to purchase only half of the goods and services it did in 1980, despite the fact that its budget stood at more than 11 million (nominal) colones greater in 1985 than in 1980. This probably exaggerates the reduction in the buying power of the MOH. While the CPI is clearly the appropriate measure to use in the adjustment computation when one is

* The interested reader is referred to Paul J. Feldstein's excellent discussion in Chapter 4 of his book Health Care Economics, second edition, John Wiley Inc., New York, 1983.

** Note that we are no longer looking only at allocations, but rather the actual execution of allocated monies. Appendix A contains the CPI values that were used in the adjustment computation.

EXHIBIT III
MINISTRY OF HEALTH EXPENDITURES
(IN CURRENT COLONES)

<u>YEAR</u>	<u>TOTAL EXPENDITURES</u>	<u>OPERATING EXPENDITURES</u>	<u>CAPITAL EXPENDITURES</u>
1975	86.465.425		
1976	110.829.200	84.251.800	26.577.400
1977	127.060.800	98.192.400	28.868.400
1978	143.278.800	108.755.300	34.523.500
1979	142.090.500	123.169.000	18.921.500
1980	178.435.700	147.491.100	30.944.600
1981	167.025.900	152.184.100	14.841.800
1982	165.677.100	149.823.100	15.854.000
1983	170.395.900	143.515.300	26.880.600
1984	191.551.200	157.288.500	34.262.700
1985	176.522.700	164.445.400	12.077.300

Source: Informe Complementario Constitucional sobre la Hacienda Pública, Ejercicio Fiscal, various years.

EXHIBIT IV

MINISTRY OF HEALTH EXPENDITURES
IN REAL TERMS/CONSTANT COLONES
BASE: CPI 1978*

YEAR	TOTAL EXPENDITURES	OPERATING EXPENDITURES	CAPITAL EXPENDITURES
1975	114,959,700 (1)	96,062,500 (1)	18,897,100 (1)
1976	144,685,640	109,989,295	34,696,345
1977	148,435,514	114,710,748	33,724,766
1978	147,710,103	112,118,866	35,591,237
1979	130,718,031	113,310,948	17,407,083
1980	139,839,890	115,588,636	24,251,254
1981	114,088,730	103,950,888	10,137,842
1982	101,269,621	91,578,912	9,690,709
1983	92,056,132	77,533,928	14,522,204
1984	92,671,118	76,095,065	16,576,052
1985	69,937,678	65,152,694	4,784,984

(1) Allocated

=

* See Appendix A for the CPI values used in the adjustment.

Source: Computed from data contained in various issues of the Informe Complementario sobre la Hacienda Pública, Ejercicio Fiscal.

concerned with the impact of changing prices on the purchasing power of the average consumer, it is at best only a rough approximation when employed for the Ministry of Health of El Salvador.

Unlike the average consumer, the Government of El Salvador is not without influence in the market for all of the various medical care inputs (e.g., doctors, nurses, drugs, bandages). Its Ministry of Health purchases for the provision of its medical care services (i.e., it is not a price-taker in all of these various markets). Most significantly the Government of El Salvador has control over the prices it pays to purchase the services of doctors, nurses, nurse auxiliaries, and all of the other personnel it hires to work for it in the MOH.

Each year the Ley de Salarios is published in the last December issue of the Diario Oficial. The Ley de Salarios (which is subsequently also published separately under the same title) lists every Central Government position in every program in every institution in El Salvador, the amount of effort each position is contracted for (e.g., two hours per day), and the associated monthly salary.

The average monthly salaries (in nominal terms) of the four key types of Centralized Agency medical care providers of the MOH (obtained from the various annual editions of the Ley de Salarios) between 1976 and 1985 are presented in Exhibit V. Exhibit VI presents the annual rates of increase in their (nominal) levels, along with the annual changes in the CPI. For most of the individual types of personnel in most of the years from 1976 to 1985, and for all of them in the period from 1982 through 1985, the rate of increase in the CPI exceeds that of the MOH's personnel costs incurred by purchasing the services of these medical care professionals. This information, coupled with the observation that a very high and persistently increasing portion of the MOH's budget comprises personnel costs (to be discussed in detail below), together suggest that the CPI adjustment is overstating the rate of deterioration in the real purchasing power of the MOH budget over the course of the last decade.

To better gauge the impact of inflation on the MOH budget, therefore, it would be preferable to use a medical care-specific price index in the adjustment process.

To our knowledge such an index has not been used in El Salvador. However, a crude but nevertheless insightful medical care "price" index has now been constructed, using only the Centralized Agency component of MOH "prices." (The short length of time available for conducting this study precluded the development of a precise medical care index. The limited time available restricted the level of disaggregation of relevant data, and consequently the level of detail, as well as the scope of the analysis.) The construction and attendant shortcomings of the index, and especially the appropriateness of its applicability to the entire MOH budget (i.e., Centralized and Decentralized Agencies, alike) are important to examine in detail. While the index developed is specific to the Ministry of Health's medical care prices, and is only a rough approximation, the order of magnitude by which it varies from the CPI demonstrates the need for developing a more refined and accurate index. This, in turn, is essential to the Ministry's gaining full appreciation and cognizance of the implications of changes in its "mix" of inputs and of changing prices on its operations. Such an appreciation is an indispensable ingredient of the health planning process now being institutionalized in the Ministry (see team member Irene Boostrom's report). The process of developing an MOH Price index is already underway within the Ministry

of Health, having been initiated recently by HID consultant Dr. Reinaldo Grueso. This is an important undertaking that merits recognition, encouragement, and full support, and must be brought to fruition.

The medical care "price" index (MCPI) that was constructed for this report consists of a simple weighted average of the three largest components of the operations expenditures of the Ministry of Health's Centralized Agencies: (a) personnel costs, (b) supplies and materials, and (c) machinery and equipment.* Together, these three categories constitute slightly more than 98 percent of the Centralized Agencies' expenditures during the 1976-1985 era. (See Appendix B, Exhibits B-1 through B-10 for a breakdown by functional category of the total Centralized Agencies' expenditures for each year during this period.) The latter two components (i.e., (b) and (c)) were combined into a single "goods" category. Exhibit VII breaks out the individual totals for the "goods" and the "personnel" categories from the total operating costs of the Centralized Agencies' expenditures for 1977 to 1986, and presents the percent that their sum constitutes of the total of such costs. It was assumed that changes in the prices of these goods are adequately represented by the CPI. The derivation of the MCPI is presented in Exhibit VIII.**

The remaining category of MOH Centralized Agency expenditures—personnel costs—was not disaggregated by type of personnel. Rather, a single average monthly salary was assumed. This simplifying assumption greatly eased the computational burden and, concomitantly, the time constraint.

Specifically, it was assumed that the average monthly salary of an MOH employee in 1977 was 700 colones. A salary index was developed using 1977 as the base year. Data on the level of salary adjustments—there have been five such adjustments since 1978 for Central Government employees—are those developed by a technician from the Ministry of Hacienda (Treasury) personnel department, and reported in Eduardo Pena and J. Curry's Department of State, El Salvador, Message Reference Number A-014 of March 23, 1986. The figures were further refined to take into account the timing of the actual implementation of the adjustments.

As is reflected in Exhibits V and VI, the percent of most of the five adjustments that were decreed varied by salary level. Generally, they were intended to have, and in fact had, an income-equalizing impact. The technique most frequently used to accomplish the goal of increased egalitarianism was the granting of lump sum raises to all employees. This consisted (more or less—though this is something of

* Although this index is referred to as a "price" index, in reality it is a "cost of care provision" index.

** To the (likely) extent that the prices of medical care-related materials and supplies increase at a more rapid rate than those of general consumer goods and services, the use of the CPI as a proxy understates the level of price increases. In that event the contribution of the "goods" category to the MCPI will be biased downward from what it is in reality. This should be borne in mind in analyzing the index and in the discussions based on its application.

EXHIBIT V
MEDICAL PERSONNEL MONTHLY SALARIES
(IN CURRENT COLONES)

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>		
Doctor (2 hrs/day)	440	480	500	520	520		
Nurse	380	440	465	515	775		
Nurse Auxiliary	250	290	325	365	525		
Sanitary Inspector	310	375	390	455	505		
	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Doctor (2 hrs/day)	540	540	540	540	540	570	720
Nurse	775	835	835	835	835	965	1115
Nurse Auxiliary	525	650	650	650	650	780	930
Sanitary Inspector	535	575	575	575	575	705	950
ARS Supervisor	N/A	N/A	570	570	570	700	850

Source: ⁼ Ley de Salarios, various years, 1986 numbers are base on two adjustments: one announced in November 1985 and one decreed in March and applied retroactively to Jan.1986. The magnitudes of the changes were personally communicated by an AID Economist.

EXHIBIT VI

**RATE OF INCREASE IN PERSONNEL COSTS
(CURRENT COLONES)**

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Doctors (2 hrs/day)	9.1%	4.2%	4' %	0 %	3.8%	0 %
Nurse	15.8%	5.7%	10.8%	50.5%	0 %	7.7%
Nurse Aux.	16.0%	12.1%	12.3%	43.8%	0 %	23.8%
San. Insp.	21.0%	4.0%	16.7%	11.0%	5.9%	7.5%
CPI	7.1%	11.7%	13.3%	12.1%	17.4%	14.7%
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	
Doctors (2 hrs/day)	0 %	0 %	0 %	5.6%	0 %	
Nurse	0 %	0 %	0 %	15.6%	0 %	
Nurse Aux.	0 %	0 %	0 %	20 %	0 %	
San. Insp.	0 %	0 %	0 %	5.2%	13.9%	
CPI	11.7 %	13.1 %	11.7 %	22.1%		

EXHIBIT VII

**DISTRIBUTION OF THE MAJOR OPERATIONS
EXPENDITURES OF MOH'S NON-HOSPITAL FUNCTIONS
(IN THOUSANDS OF COLONES)**

<u>YEAR</u>	<u>PERSONNEL</u>	<u>MATERIALS, SUPPLIES MACHINERY & EQUIPMENT</u>	<u>THESE OPERATIONS EXPENDITURES AS A % OF TOTAL OPERATIONS EXPENDITURES</u>
1977	24.836.8 (56%)	19.577 (44%)	98.6 %
1978	30.216.8 (70%)	12.946.7 (30%)	98.2 %
1979	36.444.7 (78%)	10.079 (22%)	98.2 %
1980	46.184.7 (79%)	12.537 (21%)	98.3 %
1981	47.422.5 (77%)	14.558 (23%)	98.8 %
1982	47.260.6 (85%)	8.175.2 (15%)	98.3 %
1983	49.164.4 (87%)	7.173.6 (13%)	98.6 %
1984	55.879.7 (93%)	3.970.7 (7%)	98.6 %
1985	59.772.1 (92%)	5.350.3 (8%)	97.5 %
1986	53.453.3 (77%)	19.010.4 (23%)	98.8 %

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EXHIBIT VIII

THE MOH MEDICAL CARE "PRICE" INDEX (MCPI)

$$\text{MCPI} = \left(\begin{array}{l} \text{Percent of Personnel Costs} \\ \text{in "total" operating expenditures} \end{array} \right) \left(\frac{\text{Average MoH Salary in year X}}{\text{Average MoH Salary in Base Year}} \right) + \left(\begin{array}{l} \text{Percent of Materials, Supplies, Machinery} \\ \text{and Equipment in "total" operating expenditures} \end{array} \right) \left(\begin{array}{l} \text{The CPI} \\ \text{in year X} \end{array} \right)$$

<u>YEAR</u>	<u>COMPUTATION</u>	<u>MCPI</u>
1977	(.56)(90.9) + (.44)(85.6) =	88.6
1978	(.70)(100.0) + (.30)(97.0) =	99.1
1979	(.78)(105) + (.22)(108.7) =	105.8
1980	(.79)(117) + (.21)(127.6) =	119.2
1981	(.77)(125) + (.23)(146.4) =	129.9
1982	(.85)(125) + (.15)(163.6) =	130.8
1983	(.87)(125) + (.13)(185.1) =	132.8
1984	(.93)(136) + (.07)(206.7) =	140.9
1985	(.92)(142) + (.08)(252.4) =	150.8
1986	(.77)(162) + (.23)(315.5) =	197.3

a simplification) of granting the same number of additional colones to all salary levels. An increase of the same number of colones to all levels constitutes a proportionately larger increase in the lowest levels. The percentage changes in personnel costs embodied in the MCPI, therefore, were not universally applied. Hence, the process of developing a more accurate account of the personnel costs component of the index would require identifying all of the different salary levels paid by the MOH to its roughly 10,000 employees in 1977, computing the decreed increases for each, and weighting each salary level by its respective share in the total MOH budget: an awesomely tedious and time-consuming task.

It should be noted that the 700 colones monthly salary figure is likely to be something of an overstatement of the 1977 MOH average. Refer again to Exhibit V, which contains the salaries of the major medical personnel types. With the exception of the full-time doctors, these positions constitute most of the better-paid ones within the MOH, and all are well below 700 colones. It is possible, therefore, that the salary component of the MCPI understates the true relative rate of growth in MOH Centralized Agency personnel costs. While this is not transparently the case (because of the exclusion of the better-paid physicians), to the extent that the personnel component of the MCPI varies systematically from what a more detailed analysis might ascertain, it seems plausible that the bias would be in the direction of an underestimation of the rate of increase. This, as noted above, is also the likely direction of the bias—again, to the extent that one exists—in the "tangibles" component of the index. Hence it would probably be best to regard this MCPI as capturing the minimum amount of change in MOH Centralized Agency costs.

Time constraints did not allow obtaining enough (available) data from the Decentralized Agencies to enable undertaking a similar investigation of their changing real expenditures. By examining the limited data contained in the Kraus study, however, it is evident that using a CPI-based adjustment to assess the impact of inflation on the real purchasing power of their budgets would greatly (and similarly) overcompensate for increasing price levels (see Exhibits IX and X). Again, this is primarily because of the large proportion of total expenditures devoted to "controlled" personnel costs.

In light of the limited data and time available, the relevant question becomes: is it legitimate to use the MCPI just constructed and based solely on Centralized Agency data to represent the total MOH's expenditures? How might the MCPI differ from one that might be constructed using decentralized—and especially hospital—cost data? The same changes in the average wage levels by personnel type would be identical, but clearly the mix of personnel is very different. The relatively larger proportion of full-time physicians in the hospitals is certain to pull up the average wage, probably to a level greater than the 700 colones level assumed the personnel-rate-of-increase component. The progressive structure of the salary increases that were decreed suggests that hospital wages increased at a slower pace than is captured in the personnel component of the MCPI.

Turning to the "goods" component, it may be reasonably assumed that hospital materials and supplies, and especially hospital machinery and equipment, are together more specialized and relatively more expensive than those of the Centralized Agencies. However, given the total absence of reported expenditures on machinery and equipment from 1980 to 1984, and the dramatic (41 percent) drop in the share of materials and supplies, both the distribution between

EXHIBIT IX

**OPERATING EXPENSES BY PROGRAMS AND
FUNCTIONAL CLASSES OF THE 14 HOSPITALS
(Colones)**

YEARS & PROGRAMS	GENERAL CLASSES	TOTALS	PERSONAL SERVICES	NON-PERSONAL SERVICES	MATERIALS & SUPPLIES	MACHINERY & EQUIPMENT	REGULAR TRANSFERS
1980:							
General Admin.	Services	13.885.902	10.691.215	1.551.805	1.640.902	--	1.980
Health Services		56.391.480	41.736.556	328.715	14.323.002	--	3.225
	TOTALS	70.277.400	52.427.771	1.880.520	15.963.904	--	5.205
1981:							
General Admin.	Services	13.701.861	10.970.278	1.500.648	1.230.055	--	880
Health Services		55.230.807	43.545.428	211.455	11.470.174	--	3.750
	TOTALS	68.932.668	54.515.706	1.712.103	12.700.229	--	4.630
1982:							
General Admin.	Services	13.416.109	10.731.833	1.637.711	1.072.585	--	980
Health Services		53.947.128	43.642.358	186.645	10.113.710	--	4.415
	TOTALS	67.363.237	54.374.191	1.824.356	11.186.295	--	5.395
1983:							
General Admin.	Services	13.779.991	10.975.278	1.723.374	1.080.349	--	990
Health Services		55.260.700	44.761.407	120.241	10.721.972	--	1.250
	TOTALS	69.040.691	55.736.685	1.843.615	11.802.321	--	2.240
1984: *							
General Admin.	Services	13.408.790	11.210.570	1.376.980	815.740	--	5.500
Health Services		54.781.980	46.086.780	154.310	8.530.390	--	10.500
	TOTALS	68.190.770	57.297.350	1.531.290	9.346.130	--	16.000

* As reported in Exhibit No.7 of the Kraus International Inc. study of recurrent costs.

Source: Budget Preliminary Projects of the Hospitals, 1981-1985. Financial Accounting Division. MOH.

EXHIBIT X
OPERATIONS EXPENDITURES BY PROGRAMS AND
FUNCTIONAL CLASSES OF THE MOH HOSPITALS

GENERAL CLASSES YEARS	TOTALS	PERSONNEL SERVICES	NON-PERSONNEL SERVICES	MATERIALS AND SUPPLIES	MACHINERY AND EQUIPMENT	REGULAR TRANSFERS
1980	100%	74.6%	2.7%	22.7%	0%	0%
1981	100%	79.1%	2.5%	18.4%	0%	0%
1982	100%	80.7%	2.7%	16.6%	0%	0%
1983	100%	80.7%	2.6%	17.1%	0%	0%
1984	100%	84.0%	2.2%	13.7%	0%	0%

Source: Computed from Exhibit 9.

materials and supplies versus machinery and equipment, and their combined relatively small and falling weight in total hospital expenditures, together suggest that the MCPI probably overstates the actual increase in the impact of changing price levels on the Decentralized Agencies' abilities to buy goods and services (see Exhibits IX and X).

Moreover, given (1) that the way in which we have analyzed the Centralized and Decentralized Agencies' expenditures results in about a 50:50 split in total MOH expenditures during the years analyzed, and (2) that the likely biases of the MCPI adjustment of the expenditures of these two institutional entities are in opposite directions and (though admittedly unquantified—for obvious reasons) are likely to be largely offsetting, it is concluded that extension of the use of the MCPI to the entire MOH budget will not result in any major discernible systematic bias.

Exhibit XI contains the MOH's real expenditures level from 1977 to 1985, using the MCPI adjustment. Exhibit XII presents the associated annual growth rates. Juxtaposing the annual growth rates developed by the CPI as opposed to the MCPI index uncovers three noteworthy observations:

- As anticipated, the MCPI-derived growth rates are, in general, greater in absolute terms (i.e., more positive or more negative) than their CPI-derived counterparts.
- Between 1978 and 1981 the annual spread between the two rates (based on total expenditures) is a near uniform 4 percent.
- After 1981 (and through 1985) the spread increases dramatically to about 10 percent per annum.

The rapid increase in the spread of the two series—that of post-1981 more than doubling the earlier spread—is primarily a result of the generally frozen salary levels of MOH personnel, following the July 1, 1980, increase, until the May 1, 1984, adjustment. It is imperative to recognize and fully appreciate that the impact of this decline in real purchasing power has very real practical implications for MOH operations. To exemplify its significance, let us walk through a counterfactual (i.e., a "what if. . .") exercise.

If salaries had been allowed to advance upward at the same pace as consumer prices between 1980 and 1984, the MOH would have suffered an erosion in its purchasing power of more than twice the amount that it did. Had this occurred, and had MOH staffing patterns still followed the course that they subsequently in fact did, the MOH would have experienced an average annual shortfall of 25,854,441 colones, and accumulated a debt of 129, 272,205 colones over this five-year period. Assuming the MOH did not alter its staffing levels or patterns (in either the Centralized or the Decentralized Agencies), it could only have carried on functioning by obtaining these additional monies either by (a) somehow persuading the Ministry of Hacienda to give it (the MOH) all of them, or alternatively by (b) totally eliminating (at both the Centralized and Decentralized Agency levels—i.e., throughout the Ministry) its purchases of supplies and

EXHIBIT XI

**MINISTRY OF HEALTH REAL EXPENDITURES:
THE MCPI-BASED ADJUSTMENT**

<u>YEAR</u>	<u>TOTAL EXPENDITURES</u>	<u>OPERATING EXPENDITURES</u>	<u>CAPITAL EXPENDITURES</u>
1977	143.409.481	110.826.637	32.582.844
1978	144.580.020	109.742.987	34.837.033
1979	134.301.040	116.416.824	17.884.216
1980	149.694.379	123.734.144	25.960.235
1981	128.580.370	117.154.811	11.425.558
1982	126.664.450	114.543.654	12.120.795
1983	128.310.166	108.068.750	20.241.416
1984	135.948.332	111.631.299	24.317.033
1985	117.057.493	109.048.674	8.008.820
1977-1985: (CPI based adjustment)	-18.4% (-52.9%)	- 1.6% (-43.2%)	-85.8% (-85.8%)
1980-1985: (CPI based adjustment)	-21.8% (-50.0%)	-11.9% (-43.6%)	-69.1% (-80.3%)

EXHIBIT XII

ANNUAL RATES OF GROWTH IN THE MOH'S
REAL EXPENDITURES MCPI ADJUSTMENT

YEAR	TOTAL EXPENDITURES	OPERATING EXPENDITURES	CAPITAL EXPENDITURES
1977-78	0.8%	-1.0%	6.9%
1978-79	- 7.1%	6.1%	-48.7%
1979-80	11.5%	6.3%	45.2%
1980-81	-14.1%	-5.3%	-56.0%
1981-82	- 1.5%	-2.2%	6.1%
1982-83	1.3%	-5.7%	67.0%
1983-84	6.0%	3.3%	20.1%
1984-85	-13.9%	-2.3%	-67.1%

materials, machinery and equipment, and then, still needing an additional 11,841,792 colones, also eliminating that sum of additional expenditures (for instance, eliminating three-quarters of the MOH's capital expenditures in 1984).*

In effect an unconscious but nevertheless very real tradeoff was made by the Government of El Salvador: given the level of MOH expenditures between 1981 and 1984, the Government's holding constant the nominal level of MOH (and all other public sector) employees' remuneration enabled the MOH to continue purchasing materials, supplies, machinery, and equipment, albeit in significantly smaller and continually shrinking quantities.

This counterfactual example was based on 1980 and 1984 data, rather than the more recent and more immediately relevant 1981-1985 period, because disaggregated hospital cost data were not available for the more recent period, as noted earlier. Since the CPI increased more in 1980 than in 1985, and wages increased more in 1985 than in 1980, basing the analysis on the more recent period would have revealed an even more urgent and troubling picture.

Taking into account the rising general price level, the impact of the five salary increases that have been decreed since 1978 are clearly discernible in the changing distribution of the MOH budget. This is particularly evident in the post-1980 era, when so few pay hikes have been granted. If the analysis is limited to the Regional Health Services component—the most personnel-intensive program of the Centralized Agency—since 1981 when the number of personnel peaked, the entire increase in personnel costs has been the result of increasing salaries (not more MOH employees). It is here, in the Regional Health Services—in the health centers, the units, and posts—that the tradeoff between wages and personnel on the one hand and supplies, materials, machinery, and equipment on the other has been most stark, in terms of colones (and some would maintain, but only by the combination of inference and implication, in terms of the quality and utilization of services). The discussion will return to this point below.

* The impact of this liberal wage policy is computed as follows: First take the difference between the MCPI- and the CPI-based adjustments for each year. The five resulting annual figures are presently measured in colones valued by the CPI-base year (i.e., 1978) colones. To make our measure of the purchases of materials and supplies and of machinery and equipment comparable, expenditures on these items that were actually made must be measured in the same dollar values. Hence the year total of the sum of hospitals' and the Centralized Agencies' materials, supplies, machinery, and equipment must be adjusted by the CPI. This must be done for each of the five years from 1980 to 1984. Finally, these figures are summed. They may now be directly compared to the additional MOH expenditures (measured in 1978-valued colones), which is the sum of the five individual annual differences between the CPI and the MCPI total expenditure figures between 1980 and 1984.

C. BUDGETARY PROCESS: APPROPRIATIONS VERSUS EXECUTION

The topic of discussion to this point has gone from considerations of budgetary appropriations to actual expenditures. A concern that has been repeatedly voiced within the USAID/ES Mission is that throughout the last decade—without exception—the Ministry of Health's annual budgetary allocation has been greater than its actual expenditures. This has been construed by many as evidence of the relative inefficiency of the MOH. This is an important allegation, which merits evaluating.

(1) An Important Distinction: "Initial" Versus "Final" Appropriations

The budgetary allocation figures that are generally cited on an ex poste basis are what the Ministry of Hacienda carefully labels "final allocations" ("asignaciones finales," or in earlier years, "asignaciones definitivas") in its comprehensive annual Informe Complementario Constitucional, Ejercicio Fiscal. These, for example, are the figures that are contained in Exhibit I of this paper. These are not, however, the same totals that were originally allocated in the initial budgetary exercise and allocations as reported in the Ley de Presupuesto (which is published jointly with the Ley de Salarios in the final December edition of the Diario Oficial annually, and that is also subsequently published under separate cover).

Each year the Ministry of Hacienda "fine tunes" the initial budget allocations to adjust for relatively minor changes in individual, ministerial-level program designs and implementations, but also (and with far more significant and global impacts) to adjust for discrepancies in estimated government revenues and changes in government program priorities.

(2) A Relevant Benchmark: The Central Government's Performance

Exhibit XIII contains the original and the final budgetary allocations of the Central Government of El Salvador. The initial budget allocations over this seven-year period are on average 9.6 percent less than the final allocations. Through the course of the year the budget is adjusted via two mechanisms. Certain classes of expenditures are automatically increased or decreased as stipulated in various specific articles of the Disposiciones Generales de Presupuestos. Others are altered by specific legislative decrees enacted during the course of the year. Hence, when the final budget allocation differs from its original level—which is the norm—it is usually increased (which, from an administrative perspective, is of course much easier to adapt to than a contracting allocation).

Exhibit XIV presents the initial and final budget allocations for the MOH. Over the course of ~~the~~ last decade, on average, the annual allocation of the MOH has been altered by 3.6 percent (in absolute terms). In the few years when the final allocation was less than originally planned, the discrepancies were—without exception—proportionately small, never exceeding one-half of 1 percent in any single year. On the other hand, in those years when the original allocation was augmented, the magnitude by which it was added to was relatively substantial. In half of the years of the past decade the addition to the original budgetary allocation for the MOH exceeded 5 percent. In the six years in which it increased, it did so by nearly 6 percent per annum. The overall average annual increase was 3.4 percent. On only one of the seven years for which there are comparable data

EXHIBIT XIII

**TOTAL CENTRAL GOVERNMENT GENERAL
BUDGET ALLOCATIONS: INITIAL VERSUS FINAL
(Thousands of Current Colones)**

	<u>TOTAL</u>	<u>OPERATIONS</u>	<u>CAPITAL</u>
<u>1979</u>			
Initial	1.451.925	1.075.635	376.290
Final	1.511.606	1.129.180	382.425
Percent Change	4.1%	5.0%	1.6%
<u>1980</u>			
Initial	1.676.064	1.122.964	553.100
Final	1.763.767	1.201.505	562.262
Percent Change	5.2%	7.0%	1.7%
<u>1981</u>			
Initial	1.988.518	1.408.707	579.811
Final	2.191.022	1.479.367	711.655
Percent Change	10.2%	5.0%	22.7%
<u>1982</u>			
Initial	2.111.069	1.411.397	699.672
Final	2.239.564	1.586.254	653.310
Percent Change	6.1%	12.4%	-6.6%
<u>1983</u>			
Initial	2.058.803	1.472.374	586.429
Final	2.187.627	1.522.476	665.152
Percent Change	6.3%	3.4%	13.4%
<u>1984</u>			
Initial	2.298.442	1.611.465	686.977
Final	2.957.460	1.849.834	1.107.626
Percent Change	28.7%	14.8%	61.2%
<u>1985</u>			
Initial	2.427.467	1.885.047	542.420
Final	2.583.114	1.988.264	594.850
Percent Change	6.4%	5.5%	9.7%
<u>1986</u>			
Initial	2.631.318	2.076.140	555.178

Source: Informe Complementario Constitucional, Ejercicio Fiscal, various years, "Cuadro No.3: Modificaciones a los Ingresos Estimados".

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EXHIBIT XIV

**CHANGES IN THE MOH BUDGETARY APPROPRIATION:
ORIGINAL VS. FINAL ALLOCATIONS
(CURRENT COLONES)**

<u>YEAR</u>	<u>ORIGINAL BUDGETARY APPROPRIATION</u>	<u>FINAL BUDGETARY APPROPRIATION</u>	<u>FINAL-ORIGINAL (AS A % OF THE ORIGINAL)</u>
1976	104.105.740	111.269.600	7.163.860 (6.9%)
1977	120.590.720	128.287.862	7.697.142 (6.4%)
1978	148.775.910	148.504.300	- 271.610 (-0.2%)
1979	147.617.960	174.155.000	- 462.910 (-0.3%)
1980	171.167.680	186.396.000	15.228.320 (8.9%)
1981	178.839.270	187.972.900	9.133.630 (5.1%)
1982	179.168.670	180.546.400	1.377.730 (0.8%)
1983	178.694.550	177.822.600	- 871.950 (-0.5%)
1984	200.245.840	213.891.500	13.645.660 (6.8%)
1985	197.534.280	197.532.900	- 1.380 (-0.0%)
1986	186.888.180		

Sources: Original Budgetary Appropriations figures are from the Ley de Presupuesto, the final budgetary appropriations are from the Informe Complementario Constitucional

(in Exhibits XIII and XIV) was the increase in the funding of the MOH greater than that of the total Central Government.

How much of its final allocation did the MOH actually spend? Given the dynamics of the Central Government's budgetary process, a relevant benchmark against which to gauge the performance of the MOH is the percentage of the (final) allocated budget actually expended by the entire Central Government (i.e., considered as a whole). Exhibit XV contains the percent for both the Central Government and MOH totals, as well as for their operations and capital investment activities. The third column heading in the exhibit is a ratio of the percent of the final allocations expended by the MOH to the percent of the Central Government. If, in any given year, they expended exactly the same percent of their total allocation, the ratio would be equal to 1.000. If the MOH expended a relatively larger proportion of its budget, the ratio would exceed 1.000.

With the exceptions of 1984 and 1985, the MOH expended a larger fraction of its total final allocated budget than did the Central Government of El Salvador. And, without exception, in every year from 1976 to 1985 the MOH outperformed the Central Government in terms of spending its allocated operations budget. When it comes to capital expenditures, however, the story is very different. In every year during this period, the Central Government has utilized relatively more of its allocated capital budget. Especially since 1980, the MOH's execution of its appropriated capital budget has lagged significantly, on average spending only about half of its allocated budget. Thus a larger share of the MOH's total expenditures, as opposed to its total final allocations, consists of operating costs (see Exhibit XVI). Appendix C contains exhibits of the total fund allocations versus the expended budgeted monies for 1981-1985 (a) for the Decentralized Agencies by institution, (b) for the Centralized Agencies' operating costs by program, (c) for the Ministry's capital costs by program, and (d) for the operating expenses derived from the Ministry's investment programs.

In sum, there are two countervailing tendencies. Although the MOH generally spends a larger proportion of its final allotted sum of monies, it may have a somewhat easier task of doing so because its budget is generally less subject to change over the course of the fiscal year.

There are two additional noteworthy points about the budgetary process in El Salvador. First, although the MOH has a relatively long record of proportionately large underexpenditure of its capital budget, this has not been motivated—as some might suspect—by the desire to use any unspent capital (or any other category of) allocated monies as a type of contingency fund. The Ministry of Hacienda does not allow the discretionary transferring of funds across budgetary programs or subprograms. Although it is possible to petition the Ministry of Hacienda for the right to do so, the administrative process involved is reportedly so onerous as to effectively proscribe doing so.

What accounts for the relatively large fraction of the MOH's capital budget that goes unspent—particularly since 1979—was not ascertained. Many of the monies were allocated for rural water supply systems that may have been subject to a great deal of disruption by the civil war; and/or, it may be that the MOH implementing unit is poorly managed and generally inefficient. The issue requires further analysis.

EXHIBIT XV
PERCENT OF ALLOCATED BUDGET EXPENDED

	<u>CENTRAL GOVERNMENT BUDGET</u>			<u>MINISTRY OF HEALTH BUDGET</u>			<u>RATIO OF MOH % TO OVERALL CENTRAL GOVERNMENT %</u>		
	<u>TOTAL</u>	<u>OPERATIONS</u>	<u>CAPITAL</u>	<u>TOTAL</u>	<u>OPERATIONS</u>	<u>CAPITAL</u>	<u>TOTAL</u>	<u>OPERATIONS</u>	<u>CAPITAL</u>
1976	97.8	96.6	99.5	99.6	99.7	99.5	1.018	1.032	1.000
1977	99.7	97.0	98.8	99.0	99.4	97.7	1.013	1.025	0.989
1978	96.3	95.6	97.7	96.5	96.3	96.9	1.002	1.007	0.992
1979	96.3	96.5	95.8	96.6	98.0	88.2	1.003	1.016	0.921
1980	93.2	93.8	92.0	95.7	97.4	88.6	1.027	1.038	0.963
1981	87.6	94.2	73.9	88.8	94.9	53.7	1.014	1.007	0.727
1982	86.9	94.2	69.3	91.8	98.7	55.2	1.056	1.048	0.797
1983	84.6	92.0	67.8	95.8	98.4	84.0	1.132	1.070	1.239
1984	92.4	96.6	85.3	89.6	99.6	61.3	0.970	1.031	0.719
1985	91.4	98.4	75.0	89.4	99.9	36.7	0.978	1.015	0.489

Source: Informe Complementario Constitucional sobre la Hacienda Pública, Ejercicio Fiscal, various years.

Finally, until Fiscal Year 1985 there was no "carry over" provision. That is, any funds unspent or unobligated at the end of the fiscal year redounded to the National Treasury. In Fiscal Year 1985, however, for the first time, a limited "carry over" policy was initiated. In effect the fiscal year was extended for a quarter: government agencies were given an additional three months (through March 1986) in which to spend or contractually commit their Fiscal Year 1985 budgeted monies.

D. SOME OTHER NON-ECONOMIC BUT NOT INCONSEQUENTIAL CONSIDERATIONS

We have already indirectly examined some of the changes in the relative expenditure levels by different types of functional categories. What prompted these changes? Were they results of a redefinition of the direction of the MOH's basic programmatic thrust? Are they a manifestation of a change in programmatic emphasis? The answer to these questions is no.

More to the point, the questions are largely moot. They presume that there currently exist specific criteria by which the allocation of resources within MOH is guided. Such is not the case.

Essentially three factors affect the resource allocation process of the MOH; two are national (or domestic) factors, and one is foreign. Domestically the chief determinant of the qualitative allocation of resources—i.e., the relative combination of what the MOH spends its money on—is the previous year's budget. Quantitatively the primary domestic determinant is the number of colones budgeted to the Ministry in the general budgetary process that are actually disbursed and monitored by the Ministry of Hacienda.

The foreign component, on the other hand, consists of donor agencies—providing both in-kind and monetary assistance (the latter in the form of both loans and grants). Far more flexible, dynamic, and focused, the donor agencies' activities crosscut both the quantitative and qualitative dimensions of the MOH resource allocation process, with significant direct and indirect impacts on the nature and role of the domestic influences.

The general budgetary process of the Government of El Salvador, and how it affects the MOH, in terms of the levels of available monies has been discussed. The actual process of determining the size of the Ministry of Health's budgetary appropriation, and the rules governing its use, are ultimately the outcome of an interactive process involving two complex, conceptually distinct, yet overlapping sets of actors and processes. One of these may be referred to as "national health politics"; the other "national politics." Both operate within parameters established by national economic considerations and international politico-economic considerations. It is exceedingly difficult to gain a full appreciation and understanding of this set of factors. These are not abstract theoretical notions or "black boxes" that may be summarily dismissed as non-existent, inconsequential, or too complex to understand. They are the considerations that too often get left behind as projects and donors and foreigners in general focus on difficult technical problems. Nevertheless, they are the considerations that, probably more often than technical shortcomings, account for the success or failure of an effort. These are the much more elusive considerations of the personalities involved, the personal politics involved, and the resultant configuration of the (often informal,

but nevertheless very real) power structure; the unwritten, but established institutional modes of functioning that affect the capabilities and the expectations of the MOH and of its employees and its public. Together, they largely determine the degree to which the Ministry of Health can change its mode of operations so that it will be able to effectively address the ongoing responsibilities and crisis that is at hand. It is difficult to gain a full appreciation and understanding of these sets of factors, yet they must be considered.

These political considerations are indispensable considerations in designing and implementing a project in El Salvador. The AID Mission does not appear to be adequately aware of or sufficiently sensitive to Salvadoran health politics. Particularly in a project such as the one being proposed—one that aims to improve the management of the public health sector—this is a major shortcoming that may predispose the project to failure. Altering the management of the Ministry of Health inevitably means delving into Salvadoran health care politics; "improving health management practices" necessarily means changing the ways things are done in and by the MOH. This, in turn, unavoidably means shifting the distribution of power.

Those who perceive that they stand to gain from such changes, will obviously be more inclined to endorse and work with the project in accomplishing its stated goals. On the other hand, those who perceive that they stand to lose, are likely to be disruptive and obstructive. Clearly, other factors crosscut these two motivations (e.g., professional commitment, personal or departmental allegiance, nationalism, and so on), but health care politics is a vitally important consideration that must not be ignored or taken lightly.

Probably the foremost considerations essential to the successful implementation of this project involve two individuals. If one or both of these individuals leaves the MOH or has his base of power significantly eroded in the next few years, the likelihood of the project achieving its goals will be severely compromised.

(1) Historical Budget-Based Resource Allocation And Economic Decline: An Organizational Perspective

The Ministry of Health uses historical-based budgeting to allocate its resources. ^{At} This is a very common approach to managing large organizations. The approach is useful for avoiding or at least minimizing direct political confrontations that the resource allocation decisions unavoidably involved in the development of annual budgets would otherwise make more blatant, explicit, and disruptive.

One of the implications of relying on such a resource allocation mechanism is that everything changes at about the same pace. This is vividly portrayed in Exhibit ^F XVI, which pulls out the two budget categories that support the hospitals on the one hand, and all of the other public health care facilities (the health centers, units, and posts) on the other. The percentage share of each of these classes of facilities is computed using the sum of the two individual totals as the base. While the entire MOH expenditure level varied a great deal over this eight-year period, one can see from the exhibit, that the split between hospitals and the rest of the public care system remained remarkably constant. This is one of the facts of life of historical budget-based resource allocation and planning.

EXHIBIT XVI

THE SHARE OF OPERATING COSTS WITHIN THE
MOH ALLOCATED AND EXECUTED BUDGETS

<u>YEAR</u>	<u>SHARE OF OPERATING COSTS IN TOTAL MOH ALLOCATION</u>	<u>SHARE OF OPERATING COSTS IN TOTAL MOH EXPENDITURES</u>
1975	83.6 %	--
1976	76.0 %	76.0 %
1977	77.0 %	77.3 %
1978	76.0 %	75.9 %
1979	85.4 %	86.7 %
1980	81.3 %	82.7 %
1981	85.3 %	91.1 %
1982	84.1 %	90.4 %
1983	82.0 %	84.2 %
1984	73.9 %	82.1 %
1985	83.3 %	93.2 %
1986	91.4 %	

Source: Computed from Tables.

The approach, however, while well suited and easily applied in periods of growing budgets, generally runs amok when the size of the economic pie begins to shrink. Particularly in situations where the magnitude of the economic contraction is marked, frequently, continued reliance on historical-based budgeting results in the agency that is employing the technique becoming unable to do much of anything well.

One reason is that this is an inherently conservative approach. The avoidance of political battles is a comfort, but one that in times of falling budgets is not purchased cheaply. Reliance on historical-based budgeting and planning means that the system is largely inert; its ability to introduce new initiatives is largely a function of the rate of increase in the budget. It is easier to avoid political battles when budgets are increasing a little bit slower than had been anticipated, rather than if they are falling a little faster than anticipated.

While once again the entire political calculus must be considered, let us first try to reason through the process by which—from an internal organizational perspective—an agency (particularly a public or non-profit one) adhering to historical-based budgeting might try to deal with a falling budget. It is important to note that the following discussion deals more directly with public bureaucracies, because of the relatively greater ability of their employees to avoid being held accountable for their actions. This is in large part because they do not have a bottom line—a profit-loss statement or any other universally acceptable and easily measured performance criteria.

As the size of the budget starts to decline, the first categories of expenditure "casualties" are likely to be those things that do not directly damage the organization or its personnel, at least as it is currently configured. Building construction is likely to be the first thing sacrificed, followed shortly by acquisitions of new capital equipment. These are relatively easy political sacrifices, as well. They constitute only the giving up of aspirations and dreams, as opposed to a direct sacrifice of a visible source of power and control over resources (both personnel and material).

If the economic slide continues, the items most likely to be sacrificed next are those that do not ostensibly hurt the organization, at least in the short run. Building maintenance and repair are probably the candidates slated to go first, followed by machinery and equipment repair. If, after making these cuts, the budget continues to fall, it becomes necessary to make the more painful decisions: those that do direct and immediate harm to both people and empires. The only remaining budgetary categories are materials and supplies, and personnel. In most cases, it is probably materials and supplies that will be the first to go—at least up to a point. Beyond some threshold level, it is likely that further reductions in materials and supplies will effectively bring the functioning of the organization to a halt. But, depending on the organization's activity and purpose, materials and supplies will probably be the first sacrificed because of a combination of factors. These factors may include: (1) the hope that the crisis will soon abate, and that the shortages will only be a temporary (and soon-to-end) inconvenience; (2) the desire to avoid throwing people out of work, both because of the desire to eschew responsibility for imposing the personal hardship of unemployment on anyone as well as for the less admirable reason that the number of people under the direction of a manager is—particularly in lieu of the budget—the only measure of personal power of an individual manager within the agency

(both managers and their subordinates can, therefore, be counted on to fight); (3) the time it takes to hire, orient, and train people to perform a job (and to work within a particular organization) constitutes an investment that it is reasonable and rational to try to protect (up to the point where the potential savings of dropping the individual from the payroll no longer offset the costs that would have to be incurred for the sum of the training costs and the foregone value of output resulting from the relatively lower productivity of the prospective recruit during his learning-by-doing/break-in period, although these may also be offset by the managers' opportunity to selectively dismiss personnel and to influence later hiring).

The response of the Ministry of Health to its long-term budgetary crisis has followed the very same sequence of our fictitious organization. The procession of the sacrifices, functional category by functional category, is readily apparent—especially from 1978 to 1985 in the annual budgetary breakdown of the Centralized Agency expenditure patterns (presented in Appendix B). The only variation from the scenario depicted here is that El Salvador's Ministry of Health has had donor agencies (in particular the Interamerican Development Bank) that have bankrolled—through a variety of loans and grants—the continued expansion of the health infrastructure. What this has meant, however, is that it has been necessary to expand personnel expenditures to staff these facilities, which in turn has meant that all other categories have had to contract that much faster. Referring back to Exhibit VII, it may be seen that since 1977 the share of personnel costs has grown from 56 percent of the Centralized Agencies' operating budget to 92 percent in 1985. Concurrently, expenditures on materials, supplies, machinery, and equipment have fallen from 44 percent to 8 percent over the same period. The Ministry of Health in El Salvador is experiencing a financial crisis of such great magnitude that, given its continued reliance on its present mechanism of resource allocation, it is threatened with becoming little more than an employment agency.

There is no question that the donor agencies have an impact on the MOH's operations. What types of motivating factors direct their activities? Let us back up from the case of El Salvador and look at this from a less country-specific perspective.

A number of major donor agencies around the world provide in-kind assistance and monies—both loans and grants for health care delivery—but do not get directly involved in service delivery. For a variety of reasons, many of them find the financing of facility construction a particularly appealing endeavor. It enables them (1) to provide assistance (whatever the motivation for doing so), (2) to avoid becoming "too" involved in internal politics, and (3) to have an identifiable product once the monies have been spent. Simultaneously, facility construction provides the agency with a unique combination of having a clearly defined end-of-project status by which to measure and evaluate the effort, as well as a more easily defined point at which to end funding (if so desired), or to simply maintain a more viable and gracious future exit point. These are all very attractive institutional considerations. Furthermore, upon completion of the project, both the host country (i.e., the beneficiary) and the donor agency have what may be referred to as an "inaugurable"—something that makes a highly visible and clearly positive mark on one's political scorecard.

The major donor agencies of this type active in El Salvador (i.e., those that do not get directly involved in service delivery, but choose instead to provide monies or in-kind goods and services) are the Pan American Health Organization (PAHO), USAID, and the IDB. From a long-term, recurrent cost/budgetary perspective, the most important donor activity has been the IDB's health infrastructure construction project. The project dates from 1974. From 1980 through 1985 alone the IDB channeled \$27 million into new construction. At the same time, the MOH's budget squeeze prompted it to emasculate its building maintenance and repair budget, cutting it by 40 percent (in nominal terms).

Exhibit XVII shows the evolution of the MOH infrastructure since 1975. What else has the rapid growth in the number of facilities done to the MOH budget? Assuming that the average health center has five physicians, five nurses, one dentist, and 12 auxiliaries; that the average health unit is staffed by two or three (2.5) physicians, two nurses, one dentist, and five auxiliaries and that the average post has a single auxiliary; and that the ratio of medical care to non-medical care personnel is three to one (a very conservative estimate, as it is likely to be higher), the increases in the numbers of these facilities (not including the several major hospital renovations and construction projects with their attendant increases in personnel requirements), in addition to the Regional Health Services personnel, totals more than 2,000.

Growth in the public health care infrastructure, coupled with continued reliance on historical-based budget line-item resource allocation in the face of declining monies, are the major causal factors underlying the shifting composition of MOH expenditures over the past 10 years, shifting resources from virtually all other categories into personnel.

Important questions remain. Has the level of wages had an important role as well? What have the implications been of these trends on quantitative and qualitative dimensions of health care delivery? Has the impact of these budget changes been equitably distributed by medical care site, or have some types of facilities fared worse than others? What has happened to the average "productivity" of the different facility types?

EXHIBIT XVII
EVOLUTION OF THE MOH's INTRASTRUCTURE*

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Hospitals	14	14	14	14	14	14	14	14	14	14	14
Centers	8	8	8	8	9	11	12	12	12	12	12
Units	72	94	85	103	108	107	97	98	98	100	100
Posts	115	124	135	143	159	161	198	202	208	215	218
Total:	209	240	242	268	290	293	321	326	332	341	344

* Units: Includes: "Unidades de Salud", "Unidades Móviles Comunitarias"
 Posts: Includes: "Puestos de Salud", "Puestos de Vacunación", "Puestos Comunitarios" and
 "Dispensarios de Salud".

Source: Salud Pública en Cifras and Memorias, various years.

SECTION FOUR
CHANGING MOH HEALTH FACILITIES' "PRODUCTIVITY"

IV. CHANGING MOH HEALTH FACILITIES' "PRODUCTIVITY"

A. INTRODUCTION: THE EFFICIENCY COEFFICIENT

The efficiency coefficient for any activity is the amount of output per unit of input. Measuring efficiency or productivity in a universally acceptable yet practical manner has long been a conundrum for health services researchers. The root of the problem lies in the heterogeneous nature of both the inputs and the outputs of health services.

Inputs, for instance, may consist of different types of medical care specialists, their particular armamentarium of drugs and devices, and so on. Output types, on the other hand, are not only heterogeneous, but they can be measured and evaluated along very different dimensions, depending on the skills and discipline of the analyst and the purpose of the study. For example, from a strictly medical perspective, health service outputs may range from the prevention of a disease to the reduction of muscular pain, to well-mended broken bones, to the successful extirpation of a malignant tumor. Alternatively, and just as legitimately, the analysis may be more concerned with the output of health services as measured by the restoration or improvement in the level of physical and/or mental functioning of the individual. Something of an intermediate measure might call for focusing instead on the level of social functioning of the individual; in this instance, an appropriate measure might be the reduced number of restricted activity days. A precise measure of efficiency or productivity must select from among these or other alternative measures of both inputs and output.

Confronted with this doubled-headed problem of heterogeneity in the process of defining the particular research issue at hand and the methodological approach to be employed, the analyst is forced to choose between accuracy (which requires analyzing only a very limited number of identical inputs, all to be used to generate a uniform type of output) and the scope and breadth of the work. Oftentimes, as in this study, a combination of the context and the purpose of the investigation largely dictates the exact nature of the tradeoff or compromise that is ultimately struck between these two important considerations.

The limited time available for undertaking this analysis did not afford the luxury of developing refined measures of productivity. In the discussion that follows, only the most rudimentary indicator (as opposed to measure) of productivity is developed and discussed: output per facility. It is imperative to bear in mind throughout the ensuing discussion that such an indicator ignores a host of factors that undermine its accuracy as a measure of productivity. Because such factors are left unanalyzed, the reader may infer that these factors are inconsequential in their impact on the number of service units provided. This emphatically and indubitably is not the case.

In this study, the measure of productivity adopted is the number of medical care visits. This actually is not an output or outcome measure at all, but rather is a process indicator. Justification for its selection is based on an assumption (one that is generally made only implicitly—and hence is too often overlooked or subsequently lost sight of); viz., that a medical care visit is an important input into the production (output) of "improved health." But just what "improved

health" is, and what the threshold necessary to qualify as an "improvement" is, is clearly a function of a number of factors.

Perhaps most important among these factors is the particular health problem (or the constellation of symptoms or problems) that has prompted the individual to enter the medical care market. Hence the health status of the individual is an important element on both sides of the efficiency/productivity equation. It is both an input and an output consideration.

The hospitals, health centers, health units, and health posts of El Salvador were designed, and are equipped, to deal with different types of health problems. The public, perceiving them as such (and motivated by a host of additional considerations—such as travel time—which need not concern us here), utilizes the different available health facilities differently for different health problems. Moreover, to the extent that it functions, the referral network concept of the MOH health care delivery system reinforces this pattern of different types of health problems. It refers, for example, "up" to generally more resource- and skill-intensive levels of care—from the post to the unit to the center to the hospital—as the degree of complexity of the illness or the degree of complexity of the treatment perceived necessary and appropriate increases.

In short, different facility types will have different disease mixes or patient-case mixes. This suggests that in the interest of controlling for variations in disease profiles (albeit still at only the most fundamental level), it would be best to limit comparative analysis to facilities of the same type, and the same general type of activity (e.g., particular types of outpatient care) provided by a particular type of medical care personnel.

However, that comparability is not the only factor to be considered in developing an efficiency measure. The discussion has already touched on the other general category: differences in the inputs. At one level, no two health care facilities have the same inputs into medical care provision. Even if their physical facilities and equipment are identical, and they have the same number and types of personnel mix, differences in the education, professional experiences, and motivational levels of the staff of any two facilities may produce significant differences in the quality and quantity of services (or health output) they generate.

Beyond training and educational curriculum design considerations, most of these micro-agent variations—while vitally important micro-level management concerns—are not amenable to direct control or manipulation by public policy, and therefore need not distract us in this discussion.

Focusing instead on the more practicable and macro-aggregative level—the physical facilities, equipment, and staffing—it is clear that these factors alone account for large variations in the quantity and quality of medical care provided in El Salvador. Again, unfortunately, this analysis makes no effort to investigate the qualitative dimension, and only cursorily assesses the quantitative aspects of MOH medical care provision.

One half of the efficiency equation deals with inputs. The oftentimes vast differences in equipment and staffing numbers, as well as staff/personnel types, suggest that, in the interest of developing more meaningful efficiency measures,

it is essential to somehow control for these differences. This (again) suggests that the crude efficiency measure used here be developed on a particular facility-type basis and that analyses of changes in "productivity" be limited to changes within the same facility-type category over time. Exhibit XVIII presents the absolute numbers and percentages of ambulatory visits to physicians by type of facility and region for 1977-1985. Complicating the productivity picture, however, is the fact that this period witnessed substantial growth in the public health infrastructure (refer back to Exhibit XVII).

B. RECENT FACILITY PRODUCTIVITY PATTERNS

(1) Hospitals

Looking only at ambulatory care provision from 1977 to 1981, the general level of utilization of the average hospital (what we will term its "productivity") followed a more or less steady climb (see Exhibit XVIII). By the end of this period, the number of ambulatory visits per hospital per year stood 11 percent above its initial level. After remaining relatively constant from 1981 through 1983, average hospital productivity resumed its upward trend, at roughly the same 3 percent per year pace that had characterized its 1977-1981 record. By 1985, average hospital productivity had improved 6.5 percent since 1983, and 18 percent since 1977.

Some factors that contributed to this trend were the growth of hospital personnel, physical structure improvements, and the construction of several new facilities. The temporary fall in the upward trend of hospital productivity between 1981 and 1983 may be a reflection of the bringing online of new facilities and newly constructed or upgraded units. Generally they can be expected to have high initial (or start-up) costs. Subsequently these "costs" fall as labor productivity increases—a result of learning-by-doing—and as work routines and expectations become established.

Another factor probably contributing to this increased use of hospitals was the economy's increasingly poor performance. Around the developing world, health services researchers have found that the income elasticity of demand for public health services is less than that for private health services. From what evidence is available (only anecdotal), this appears to also be true of El Salvador. That is, as income increases, people become better able to afford relatively more expensive private medical care, and generally increase their use of it relative to public services. On the other hand, when income is falling, the tendency is for people to forgo their preferred, more expensive, and now less affordable, private medical care—and instead use less expensive, MOH-provided services.

The magnitude of the fall in income levels in El Salvador has been great: GDP fell by 30 percent between 1979 and 1982 alone; per capita levels are still falling, and are expected to continue doing so in the near future. Thus, one would anticipate a fairly substantial increase in the utilization of MOH facilities. This substantial increase has not occurred.

Note: Income elasticity of demand is a measure of the sensitivity of demand to changes in income levels. Technically it is the percentage change in income divided by the percentage change in quantity of the good. If this ratio is equal to one, the share of income spent on the good in question remains constant—and since income is increasing, this means increasing absolute expenditures on the

EXHIBIT XVIII

THE GROWTH OF MATERIALS AND SUPPLIES COMPONENT
OF THE REGIONAL HEALTH SERVICES PROGRAM EXPENDITURES

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Nominal colones	1.251.347	1.354.407	1.320.670	1.883.233	1.998.585
Real colones*	1.461.854	1.396.296	1.214.968	1.475.888	1.365.154
Annual % change in nominal terms		(8.2%)	(- 2.5%)	(42.6%)	(6.1%)
Annual % change in real terms		(-4.5%)	(-13.0%)	(21.5%)	(-7.5%)

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u> (original allocation)
Nominal colones	1.322.983	1.235.175	1.509.777	1.450.894	1.875.910
Real colones	808.669	667.301	730.419	574.839	
Annual % change in nominal terms	(- 3.4%)	(- 6.6%)	(22.2%)	(- 3.9%)	(29.3%)
Annual % change in real terms	(-40.8%)	(-17.5%)	(9.5%)	(-21.3%)	

1977-85 Averages: Average annual growth rate of nominal expenditures: 2.0%
Average annual growth rate of real expenditures: -9.2%
Cumulative annual growth rate of nominal expenditures: 1.85%

Overall changes
1977-1985 : Nominal expenditures: 15.9%
Real expenditures: -61.0%

* CPI-based adjustment. Base is 1978.

Source: Informe Complementario Constitucional, various years.

good. If the income elasticity of demand is greater than one the good is characterized as a "luxury"; people respond to increasing income by increasing their purchases of the good at a rate even faster than the pace at which income is increasing. In this case—medical care is generally thought to be so characterized—both the absolute amount of money and the relative share of income spent on the good increases. If the income elasticity of demand is less than one, the good is described as a "necessity." As income increases, the share of income going to purchase "necessities" decreases; the absolute amount of monies (colones) spent on them, however, could be increasing or decreasing. All of these relationships can be turned around as well. If income is falling, the share of income being spent on a luxury will fall more rapidly than the rate at which income is falling. Given that the income elasticity of demand for all medical services is thought to be greater than one, but that of public services is smaller than that of private services, one would anticipate a shifting of demand and utilization from the private to the public sector when income falls.

Although it seems unlikely, another possible explanation is that the relative income elasticity differential between public and private health sector services is not as great as has been found elsewhere in the world. Other possibilities, which simultaneously could be true, and are more plausible, are (1) that the quality of services in the hospitals has decreased, or (2) that the hospital outpatient departments are operating at their maximum capacity levels, or (3) that other (non-monetary) prices associated with obtaining care have increased to such an extent that they have discouraged enough would-be users so as to offset the expected increase in utilization. Such prices might include the increased hazards of travel due to the war, the increased unreliability of transportation due to the war, increased waiting times necessary to see providers at the (now more crowded) hospitals (including what may be termed appointment-time delays—having to come back the next day or in three days), and the possibility of increased likelihood of being subjected to (more?) brusque, less personal treatment because of the increased workload of health care personnel. The dearth of information about the various factors involved in these possible scenarios precludes being able to definitively determine which are in fact accurate, which are the most important, and how changes in health policy might be designed and implemented to affect them.

The absence of information of this type is characteristic not only of hospital outpatient services, it is common to the entire health care delivery system—private and public alike. This information is important to increasing the efficiency of service delivery, to being able to predict both levels and changes in utilization, and thus to health planning. Obtaining such information should be a priority.

(2) Health Centers, Units, And Posts

During the past 10 years, while the number of health centers has grown from eight to 12, the average productivity of a health center has remained essentially constant (see Exhibit XIX). Given the expansion in the number of such facilities, this means, of course, that the share of MOH ambulatory "customers" treated at health centers has increased.

The greatest expansion of the public health care delivery system infrastructure has been at the "lowest" levels of care. From 1977 to 1985, the number of health

EXHIBIT XIX

AMBULATORY VISITS TO DOCTORS
BY TYPE OF FACILITY AND REGION

	<u>COUNTRY WIDE</u>	<u>OCCIDENTAL</u>	<u>CENTRAL</u>	<u>METROPOLITAN</u>	<u>PARACENTRAL</u>	<u>ORIENTAL</u>
<u>1984</u>						
Hospitals	949.342	150.674	123.417	407.361	116.975	150.915
%	(38.8%)					
Centers	264.156	49.435	17.872	26.847	63.383	106.619
%	(10.8%)					
Units	937.872	182.126	119.762	448.857	78.843	108.284
%	(38.3%)					
Posts	294.176	63.326	68.678	37.572	56.938	67.662
%	(12.0%)					
T O T A L	2.449.614	445.651	329.729	923.531	316.769	434.024
<u>1983</u>						
Hospitals	912.341	149.026	122.709	388.045	106.908	145.653
%	(41.5%)					
Centers	241.400	47.658	23.403	25.040	55.850	89.449
%	(11.0%)					
Units	819.379	167.586	105.615	436.991	49.790	59.397
%	(37.3%)					
Posts	221.740	46.804	50.188	38.266	47.569	38.913
%	(10.1%)					
T O T A L	2.195.945	411.074	301.915	888.342	260.746	333.868
<u>1985</u>						
Hospitals	971.942	174.892	118.302	401.589	120.657	156.502
%	(42.8%)					
Centers	258.567	49.856	19.590	29.200	63.886	96.035
%	(11.4%)					
Units	833.836	168.283	98.459	403.782	60.912	102.400
%	(36.7%)					
Posts	205.776	37.992	96.975	35.014	39.814	45.981
%	(9.1%)					
T O T A L	2.271.978	431.023	283.326	869.585	287.033	401.011

Source: Cumplimiento de Metas de los Programas de Salud, Various years.

units increased 18 percent, and the number of health posts increased 61 percent. In 1985 these facilities numbered 100 and 218, respectively.

MOH data, unfortunately, aggregates consultas provided by these two types of facilities, until 1982. Hence, longitudinal analysis of the pre- versus post-1980 productivity of these facilities can only be performed on an aggregated basis. Subsequent to this analysis, the facilities' individual records will be assessed from 1982 to 1985.

There are three distinct chronological phases in the average productivity level of health units and posts over the 1977-1985 era. Each of these phases is three years long. During the first, from 1977 to 1979, health posts and units on average accounted for 54.6 percent of the total annual number of ambulatory consultations provided by physicians at all MOH facilities. Together they averaged 5,028 consultations per facility.

During the second three-year period, from 1980 to 1982, their contribution to total MOH facility-based ambulatory physician encounters dropped to an annual average of 51.5 percent. Simultaneously, as their share of total MOH facility-based doctor visits dropped, so too did their average annual productivity. It fell 16 percent from the previous three-year period, to average 4,248 per facility per year during the 1980-1982 era.

This was due at least in part to the changing relative and absolute numbers of centers, units, and posts. From 1979 to 1982, three new health centers and 43 new posts were opened. The number of units, however, actually declined from 108 to 98. It may be deduced, therefore, that the share of health units is the sum of units and posts decreased. While their proportions had remained relatively constant from 1977 to 1980—with about 40 percent of the total number of posts and units consisting of units—in 1981 this share dropped sharply to one-third (33 percent), and remained in the 31 to 33 percent range thereafter (through 1985).

The weighting of the units and posts productivity measure, therefore, concomitantly fell in 1981. Since posts are much smaller in terms of physical space, equipment, and physician and total staff time, one would expect—as is indeed the case—that the change in the relative numbers of these facilities would generate a drop in the average annual productivity per facility.

In addition to the relatively greater rate of growth of centers, another reason the share of units and posts fell in total MOH facility-based, ambulatory doctor visits is the far greater probability that the civil war—which erupted full scale in 1979—disrupted the operations of the units and posts as opposed to the hospitals and health centers. The latter two types of establishments are located in the principal cities of the country, areas that have never fallen under the direct control of the guerrillas. Units and posts, by contrast, are sprinkled throughout the country and many are located in the so-called "conflict zones."

Although available evidence (including the Klassen Committee Report, 1984, and the "Trauma Study" of Faich and Coppedge, June 1983) suggests that guerrillas have with few exceptions recognized and respected the neutrality of MOH medical personnel, it is nevertheless clear that the war has been disruptive of some Ministry service provision. In addition (on the other side of the medical care market), it is likely that the demand for MOH medical services has been adversely

affected by the war as well. The fighting—especially in rural areas—has probably reduced the use of services by inhibiting individuals from traveling (particularly on foot) to facilities. In effect, the war has reduced access to MOH care by increasing the costs (viz., the potential physical and associated mental costs) associated with traveling to care sites.

There are some data available on the numbers and locations of the (generally temporary) closings and of the delayed openings of new MOH facilities. This information, however, is spotty: an accurate, ongoing portrayal of the public health system's status is elusive. The information that is available has generally been derived from one-time investigations. As such, it affords only a snapshot of the system's status at a particular moment in time. This is certainly understandable: the dynamic nature of guerrilla warfare renders it unavoidable.

Absent crucial information concerning the time dimension, no foundation existed for developing even rudimentary estimates of the extent (i.e., the number of facilities) or the duration of MOH facility closures. Consequently, no effort was made to correct the productivity measures for these occurrences. This, of course, results in a downward bias in those measures that are reported. That is, because they assume that all health units and posts were fully functional throughout the entire year, the reported measures are the minimum productivity levels of these facilities.

The health unit and health post trends that were established in the 1980-1982 period relative to the 1977-1979 period, however, carry through into and continue throughout the 1983-1985 era. The share of units and posts in total MOH facility-based, physician-provided ambulatory care visits continues to decline. It falls by another 2 percent, leaving it at just less than 48 percent on average in 1983-1985, as compared with nearly 55 percent in 1977-1979. Moreover, this latter period is one in which the number of centers remains constant, while the number of units increases slightly (by two), and the posts increase in number by 16. Furthermore, the intensity of the war—while not to be underestimated, and while certainly not inconsequential—had decreased somewhat, especially from the 1981-1982 period.

Similarly, the productivity of posts and units continued its slide, falling another 16 percent, to 3,550 physician visits per facility per year. Thus, from the 1977-1979 period to the 1983-1985 period, the average annual productivity of posts and units fell by nearly 30 percent, while their share of doctor visits dropped nearly 7 percent.

Before commenting on the possible causes of these trends, it would be useful to first analyze the disaggregated behavior of the units and posts between 1982 and 1985. Here the picture that emerges is more ambiguous. If 1984 may be regarded as an aberration, it may be seen that in the remaining years both health units and posts experience monotonically declining productivity levels, as well as shares to total consultations.

Alternatively, led by the parallel "behavioral" pattern of hospitals, it might be that after experiencing declines in 1982 and 1983, 1984 marked the advent of a restoration of earlier recorded productivity and share of physician consultation levels, which (for both the units and the posts—but not for the hospitals) were (inexplicably) reversed in 1985.

In light of there not having occurred any major change in MOH policies, and with the aid of the longer time-period trends just analyzed, it would seem that the former interpretation (i.e., that 1984 is an aberrant year) is the more plausible explanation.

What other types of considerations might cast light on the causes of the relative deterioration in the productivity and the share of physician visits being provided by the health posts and units? Possible explanations may be conveniently divided into two general categories: (1) factors explaining a reduction in the demand for these physician services, and (2) factors explaining a reduction in their supply.

Turning first to the demand influences, in studies conducted throughout the world, the variable that has been found to be the single best predictor of medical care utilization is "need." As is widely recognized, the need for medical care services is not to be equated with either demand or utilization. "Need" for medical care is determined by the simultaneous consideration of some culturally appropriate measure of health status and the perception of the role and capabilities of accessible and acceptable medical care services to alter health status. *

Demand, on the other hand, is the translation of perceived need into an indication of the intensity of willingness (or desire) and the ability to incur psychosocial, emotional, time, and monetary costs to obtain those medical care services. Finally, utilization is realized demand: it reflects an adequate level of both willingness and ability to obtain the desired care from a source that is simultaneously perceived as relevant (acceptable) and construed as accessible.

How might these multifaceted factors help account for the decreased use of health units and health posts over the past six years? The changing general level of health of the average Salvadoran presents something of an enigma at first glance. But, looking to the general "need," and the highly correlated and more directly relevant measure, viz., demand for medical care services, after marked upsurges in 1980 and 1981 in the theretofore downward secular trends of the incidence of most (especially communicable) diseases, the incidence levels of most of the more commonly occurring illnesses were again brought "under control" (at least by historical standards in El Salvador—i.e., the secular trends were largely re-established).

At least two relevant points may be associated with this observation about trends in the general health status of the people of El Salvador. First, the fact that the general health status of Salvadorans worsened so dramatically during 1980 and 1981 may be construed as an indicator of both the ferocity and the intensity of the war—the level of social, economic, and physical disruption it caused. From 1979 to 1985 it is estimated that approximately 60,000 Salvadorans (more than 1 percent of the national population) were killed in the war. While no estimates of

* It is imperative that health status measures be recognized as being culturally specific, and accordingly measured in a "culturally appropriate" manner. It serves little purpose to plan and provide for the treatment of an illness if people do not define its symptoms or do not regard its manifestations as an "illness."

the number of non-fatal casualties exist, the number is unquestionably many times larger.

Second, it may be inferred that concurrently and consequently the activities of the MOH, and particularly (for reasons already noted) its posts and units, were very probably subject to significant disruption.

Another supply consideration is also worth noting. The hostilities certainly resulted in a change in the mix of cases treated by the MOH facilities. Trauma and other effects of war have probably displaced the generally less acute ailments that would otherwise have been treated in the posts and units. The relative paucity of medical care resources available at posts probably meant that they served more as front-line first aid stations before transporting such cases on to better-equipped facilities. This is similarly true—though to a lesser degree—of health units. It is likely, however, that relatively greater shifts in case mix occurred in the hospitals and centers, particularly for their inpatient care.

The treatment of more war-related injuries necessarily meant that there were fewer resources (both personnel time and medicines and supplies) to be used to treat "regular" ailments. In addition, to the extent that the facilities remained open, their clientele's knowledge, or their mere perception that their regular service sites were being used to provide such treatment, probably discouraged people from seeking the treatment that in other circumstances they might have felt more strongly about needing.

Another supply-side consideration consistent with the reduced use of the health posts in particular is that the schedules of the physician-headed mobile health units (unidades moviles) that provide services at posts were certainly subject to a much greater degree of uncertainty by the general disruptions, dislocations, and dangers associated with the war. The ever-dynamic war certainly forced cancellations of usual rounds in the interest of physical safety. In addition, the general deterioration in the MOH vehicle fleet and the growing length of time required to repair vehicles (documented by Kraus International and Westinghouse) have further complicated matters.

Finally, less-motivated physicians (and rural mobile health units in general) may have found the revolutionary war a convenient excuse to reduce their level of effort in fulfilling their normal duties and obligations.

To the extent that the war disrupted the arrival of the physician and supplies, and/or to the extent that would-be post utilizers perceived this to be a common, or even a potentially likely occurrence, prospective clientele were probably discouraged from seeking care as often as they might otherwise have done. To the extent that the utilizers of posts, and to a lesser extent the utilizers of health units, came to expect the more frequent disruption of medical personnel (especially physician) services, as well as drug and supply availabilities, people would tend to make the trip to the facility less often. In effect, this was another way in which the war altered the public's perception of its access to, and the availability of, care. The war added yet another dimension to the decision of whether or not to seek care; viz., after incurring the direct costs of travel and time, and the indirect (or opportunity) costs of having to disrupt regular scheduled activity (to the extent that the illness and/or the war had not already obliterated such routines), what was the probability that the effort would be for naught? That

upon arriving at the facility, the person would find it closed, or without essential supplies? Working hand-in-hand with the war-heightened apprehension of traveling to an MOH facility, this specter is likely to have been another partial explanation of the reduced use of health units and posts in the past six years.

Yet another demand factor that might underlie the relative decline of the use and productivity of health units and posts is also—like the preceding scenario—related to several supply considerations. It is and has been a growing problem, however, independent of the war. As already noted, since 1973 a growing proportion of the Ministry of Health's Regional Health Services budget has been spent on personnel. This has meant that a shrinking supply of resources has been left for supplies and materials, and, perhaps most important from the average Salvadoran's perspective, drugs.

With the exceptions of 1980 and 1981 (which saw average outlays of about 1,950,000 colones per year), between 1977 and 1985, the absolute amount of money spent on materials and supplies for the Regional Health Services—i.e., for the centers, units, posts, and regional offices—has remained relatively constant: between 1,250,000 and 1,500,000 colones (in nominal terms). In nominal terms, this amounts to an average cumulative annual growth rate of 1.85 percent (see Exhibit XX). In real terms, however, it means that the supplies and materials of health centers, units, and posts purchased with MOH budget funds have been contracting at an average annual cumulative growth rate of about 11 percent, leaving them in 1985 at a level 61 percent lower than in 1977. This has resulted in MOH outpatients frequently not receiving medications, as documented by the Klassen Committee Report and the Management Evaluation Study of Kraus International.

Anecdotal and anthropological evidence suggests that one of the primary reasons Salvadorans seek care either at units or (especially) at posts is to obtain medicines (e.g., see Polly Harrison's 1978 study, Annex A of the 1978 Health Sector Assessment). The decreasing amount of drugs and other materials and supplies, therefore, has probably reduced the demand for the services of these MOH facilities. This is also likely to be true of centers. It was learned at one of the centers visited that the norm was for only about half of the ordered drug supply to be obtained. To fill this funding gap, centers have increasingly been turning to funds they individually raise through "voluntary" contributions of (it varies by center) from one to two colones per curative ambulatory visit to augment their budgets in general and their supplies of medicines in particular.

These same sources of funds, together with other patronato-raised funds (to be discussed in greater detail below), are also possible sources of revenues for the health units and posts to augment their budgets—specifically to buy medicines and other supplies and materials, or to hire more personnel. These mechanisms, however, have not been as important a generator of monies for these facilities as a whole, as opposed to the centers and hospitals, for a variety of reasons (discussed below).

Aggregated Regional Health Services data reveal that these revolving patronato accounts, which have traditionally been used in large part to finance additional personnel (generally unskilled general laborers), are increasingly being used to purchase additional drugs. Between 1983 and 1984 alone, for example, the number of patronato-funded positions fell 56.5 percent.

EXHIBIT XX

**OUTPUT PER FACILITY BY FACILITY TYPE:
THE NUMBER OF DOCTOR PROVIDED CONSULTATIONS PER FACILITY**

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Hospitals	58.737	60.240	60.989	61.102	65.464
Centers	20.745	21.453	21.955	17.275	23.982
Units and Posts	5.177	4.891	5.017	4.438	4.448
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Hospitals	65.335	65.167	67.810	69.424	
Centers	21.794	20.117	20.013	21.547	
Units and Posts	3.857	3.470	3.911	3.269	
Units	9.183	8.361	9.379	8.338	
Posts	1.273	1.066	1.368	944	

Source: Computed from Tables.

Generally not having as large a similar pool of resources to draw upon, health units and posts have been put at a relative disadvantage as drugs have become an increasingly scarce commodity. As a result, the relative attractiveness of obtaining/receiving physician services at the unidades and puestos, even though they might be more readily accessible, has decreased.

Again, Polly Harrison's study has relevant findings for interpreting these developments. She found that the clientele of posts, and to a somewhat lesser extent of unidades, are overwhelmingly (over 80 percent) women and children. She attributed this, in part, to the general preference for pharmacies, drugs, and private physicians, coupled with the fact that generally only males have cash. Moreover, there is a general preference for treatment by physicians, which (for reasons already cited) has probably been less possible to obtain at units and posts during this period. These twin considerations, together with the falling level of available medicines in the posts and units, probably encouraged women and children to seek care at the nearest facility where they could hope to obtain free medicines. Once the decision has been made to travel to a different, more distant facility, however, the center would be the likely first stop. Because El Salvador has such an excellent road network and a generally very good public transportation system, to pay the additional incremental price of bypassing the center to go to the hospital, where one can be more certain of obtaining free medicines, may be a perfectly rational decision.

There may be another cultural-sociological factor at work here as well (suggested by Jaime Benavente and Reinaldo Grueso). Many of the posts and units are staffed by young physicians and nurses doing their year of national service duty. While it might be acceptable to take one's children to see such a provider, persons who are older than the recent graduate may feel that the care provided by an inexperienced young provider is of questionable quality and that to seek their help and advice is too socially awkward; it may be viewed as socially degrading to be told by a "kid" what you have been doing wrong, and/or how to take better care of or improve yourself. The extent that either of these considerations is an important determinant of post and/or unit utilization is unknown. This again, is a serious information gap that needs to be addressed. If the age of the provider is an important factor discouraging the use of these facilities, alternative uses for national service duty, and requirements (e.g., higher pay) for obtaining adequate coverage of these facilities by older and more experienced physicians, need to be examined.

Yet another demand factor that contributes to an explanation of the relative decline in the share of and productivity of the health units and posts since 1979 is that there has been a significant increase in the level of international agencies' activities—in both private voluntary organization (PVO) and donor agency capacities—throughout El Salvador. Project HOPE, for instance, has trained and supports (sometimes with a salary) about 100 community health workers similar to the MOH's Ayudantes de Salud Rural. Various efforts of these agencies include the provision of ambulatory primary health care services. As such, they have come into direct competition with the MOH's health units and posts: they generally serve as substitutes for these MOH primary care facilities. Like much of the general health care delivery system of El Salvador (public and private components alike), little is known about the role or impact of these additions to the system as a whole. This is an area crying out for further systematic research.

SECTION FIVE

**ANALYSE OF THE CHANGING PATTERNS
OF PERSONNEL EXPENDITURES:
POSITIONS, SALARIES, AND "PRODUCTIVITY"**

V. ANALYSIS OF THE CHANGING PATTERNS OF PERSONNEL EXPENDITURES: POSITIONS, SALARIES, AND "PRODUCTIVITY"

The increasing absolute and relative levels of expenditures of the Ministry of Health, in general, and in particular on the portion of the Regional Health Services budget on personnel, has been a major problematic concern expressed repeatedly by various members of the USAID/ES Mission.

The growth in personnel expenditures can be caused by an increase in the salary levels, an increase in the number of personnel, or some combination thereof. The very different implications of the source of the increase in outlays for personnel for medical care service delivery and for public policy options underscores the importance of disentangling its cause(s). First, the discussion will focus on the changing numbers of staff.

A. CHANGING NUMBERS OF POSITIONS

The rate of increase in the number of Centralized Agency personnel (i.e., all MOH employees with the exception of the Decentralized Agencies—which consist primarily of the 14 hospitals) peaked at an annual rate of 6.9 percent in 1977. Thereafter, it followed a generally constant rate of decline, becoming negative in 1982, since when it has remained about constant (at about -0.3 percent). The absolute number of total Centralized Agency personnel (the Regional Health Services and the MOH Central Office—Secretaria de Estado) grew from 9,046 in 1975 to peak in 1981 at 12,716.

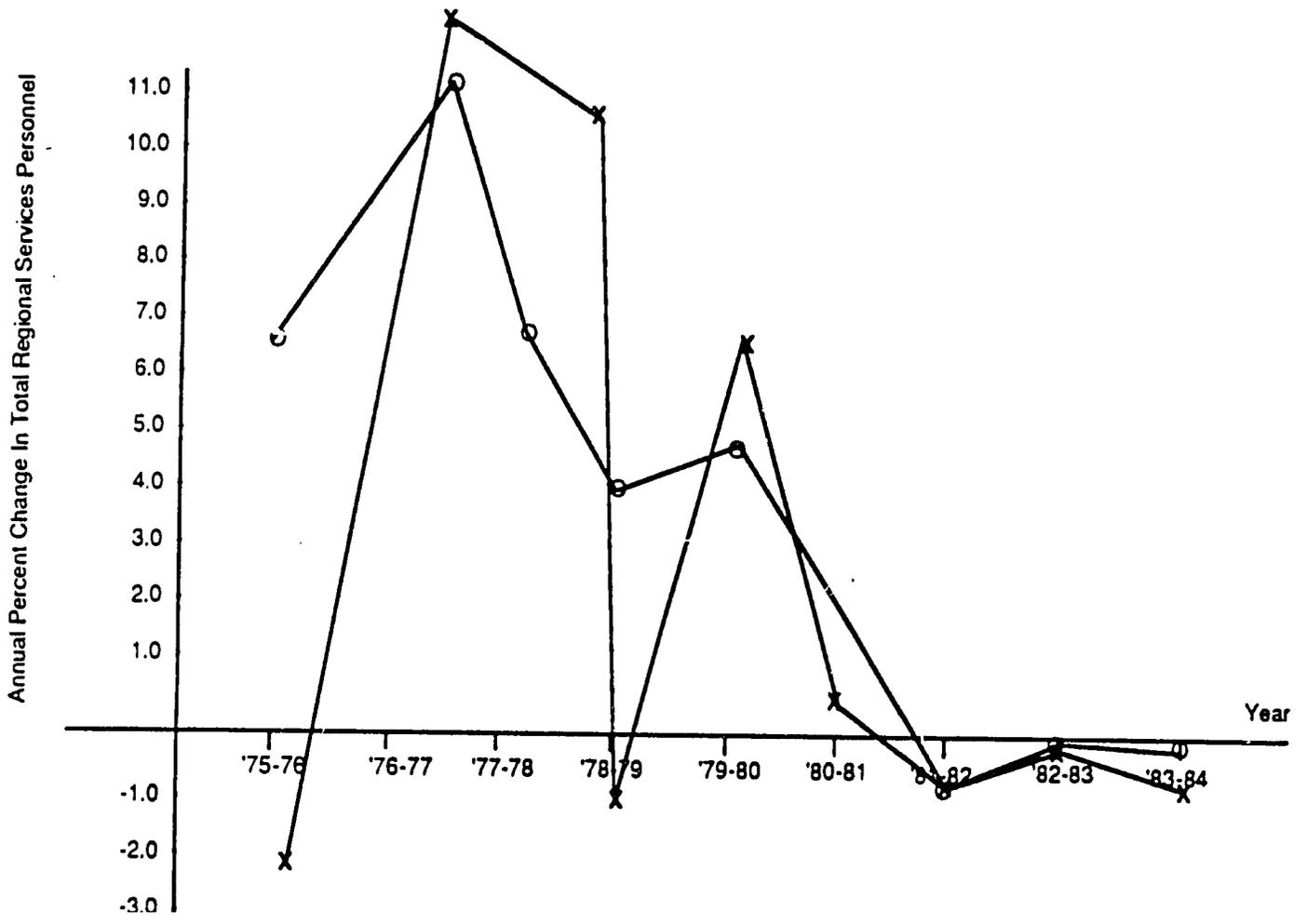
Focusing specifically on the Regional Health Services, personnel grew from 8,517 in 1975 to 11,934 in 1981, falling slightly to 11,827 in 1984. It should be noted that these figures do not include contracted labor and health board (patronato) positions, and thus actually understate the totals. There is considerable confusion about the total number of positions and employees of the MOH. One source of this confusion is the failure to distinguish between whether one is discussing Centralized or Decentralized Agencies, or only the Regional Health Services (i.e., the units, posts, and centers), or only the hospitals. Generally the number discussed is the Centralized Agency-only figure, which, by not including the hospitals' personnel, understates the total. The number discussed here is only the Centralized Agency personnel (i.e., Regional Health Services and Central Office personnel).

In the (only) two years for which contracted labor and health board (patronato-funded) positions are reported in either the Salud Publica en Cifras or Memorias—1983 and 1984—the drop in the number of these types of positions alone in the regions was 56.5 percent. Hence, if the number of positions in the regions includes these types of positions, the percentage change between the two years for which there is such data (1983 and 1984) becomes much more pronounced, falling from -0.3 percent to -6.4 percent.

The second trend that may be identified is that the individual rates of change in the numbers of doctors, nurses, and nurse auxiliaries—while each following essentially the same general pattern—experienced oftentimes radical annual fluctuations in both absolute and relative terms between 1975 and 1984 (see Exhibits XXI and XXII). The most marked of these swings occurred in 1979 and

EXHIBIT XXI

ANNUAL PERCENTAGE
CHANGE IN REGIONAL PERSONNEL, 1975-1984

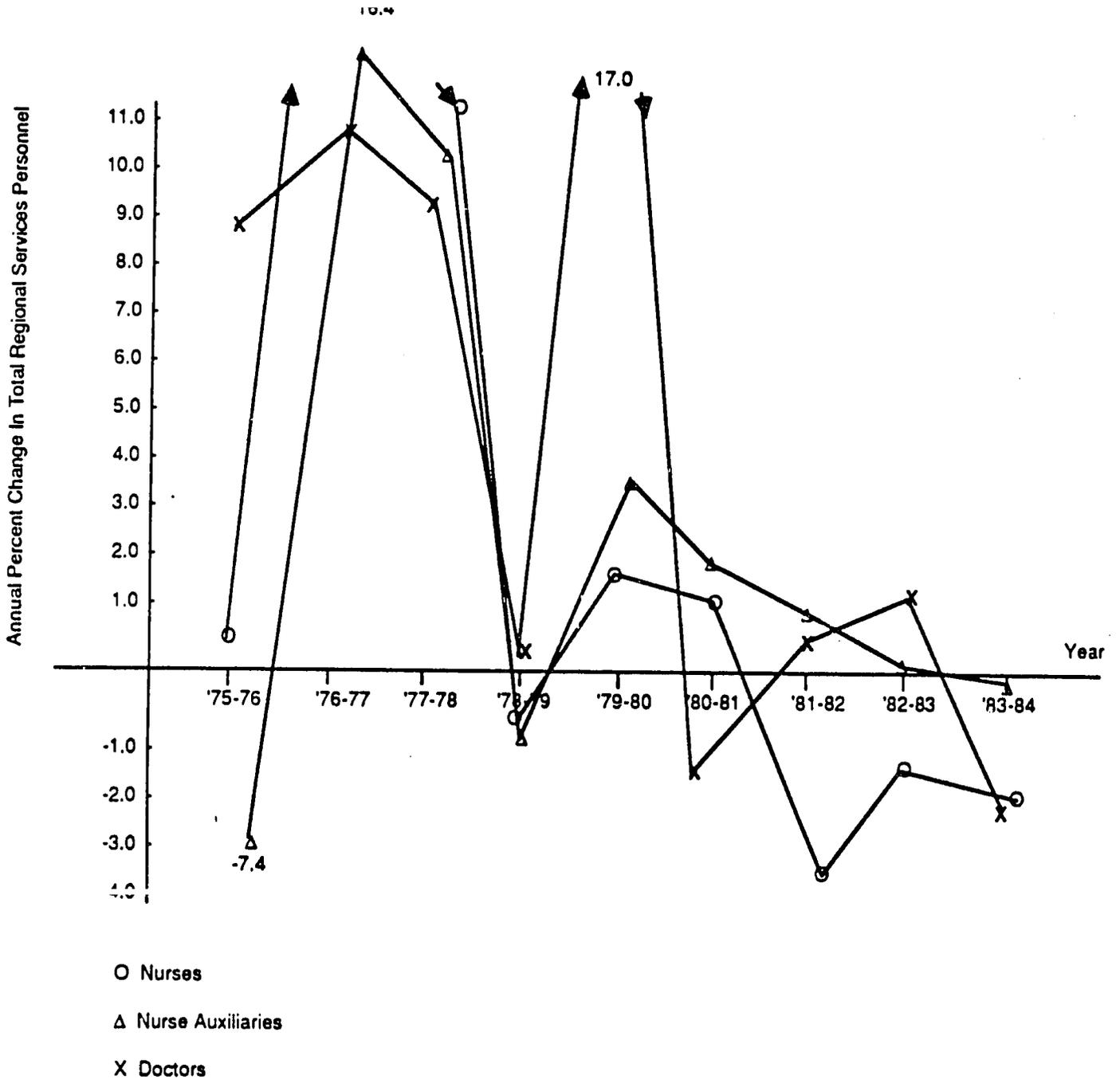


O All Regional Services Staff

X Doctors, Nurses, and Nurse Auxiliaries

EXHIBIT XXII

ANNUAL PERCENTAGE CHANGE
IN REGIONAL PERSONNEL, 1975-1984



1980. At the beginning of that period—in both 1977 and 1978—the annual rate of increase in the combined numbers of doctors, nurses, and auxiliaries exceeded 10 percent. In 1979 the rate of expansion fell precipitously; the absolute number of such personnel actually contracted in 1979. The following year, 1980, another dramatic about-face occurred. A general growth rate of nearly 7 percent was recorded for these three types of providers, with the number of doctors expanding at about 10 times the rate of nurses, and more than two-and-one-half times the rate of auxiliaries.

The third identifiable trend deals with the changing mix of personnel that occurred over this decade. These are numerically detailed in Exhibit XXIII. The relative weight of what will hereafter be referred to as the "medical care team," which consists of doctors, nurses, and nurse auxiliaries, has remained relatively constant over the decade. That is, the direct health care delivery service capability (as measured by the share of the medical care team in total regional health positions) did not change appreciably over the past decade. The composition of the team, however, did change. Widely fluctuating relative annual rates of growth of different types of medical care providers obviously generates changes in the relative skill-intensity mix and concomitantly produces changes in the relative costs of the services provided.

From the start of the period, 1975, the doctor-intensity of medical care providers (i.e., the ratio of the number of doctors to the combined number of doctors, nurses, and nurse auxiliaries) continually increased through 1980. Since then, after falling slightly in 1981, it has remained relatively constant, and substantially above its 1975-1979 level.

Other things being equal—most importantly the division of labor within the medical care team, the MOH clientele-to-provider ratio, and the productivity of MOH providers—this would suggest that the average skill intensity of the care provided by MOH personnel as a whole has increased, and concurrently that the MOH's average (personnel-derived only) cost of providing a medical consultation has increased.

The situation with respect to nurses is more ambiguous. After initially increasing slowly but steadily from 1975 to 1979, the nurse-intensity of the pool of potential MOH medical care providers (measured, again, as the ratio of the number of nurses to the combined number of doctors, nurses, and auxiliaries) followed a near mirror-image path of slow but steady decline. By 1984, it stood slightly below its 1975 level, and at its lowest level for the decade.

Finally, the auxiliary-intensity of the MOH provider pool has changed very little during the past 10 years. In large part this is because it comprises nearly one-half of the sum of these three types of potential providers: a larger number of changes in the absolute numbers of auxiliaries is necessary to change the auxiliary-intensity ratio. The relatively constant level of this measure is also partly attributable to the generally counteracting and offsetting tendencies of the fluctuations in the number of doctors vis-a-vis nurses.

In 1975, the auxiliary-intensity measure was at its highest level for the decade. It reached its low point in 1980, the same year that the doctor-intensity measure peaked, and only one year after the nurse-intensity measure peaked. Thereafter the auxiliary measure slowly climbed upward to slightly less than its initial level.

EXHIBIT XXIII

REGIONAL POSITIONS 1975-1984*

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
Médicos	1.007	1.097	1.215	1.325	1.327	1.562
(% of the 3)	24%	27%	26%	26%	26%	29%
Enfermeras	1.005	1.010	1.176	1.313	1.307	1.328
(% of the 3)	24%	24%	25%	25%	25%	24%
Aux. Enf.	2.178	2.016	2.265	2.513	2.496	2.584
(% of the 3)	52%	49%	49%	49%	49%	47%
Los Tres	4.190	4.123	4.656	5.151	5.130	5.474
(% of total)	49.2%	45.5%	46.2%	47.8%	45.7%	46.7%
Total	8.517	9.052	10.071	10.778	11.220	11.717
(% change)		(6.3%)	(11.3%)	(7.0%)	(4.1%)	(4.4%)
	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>		
Médicos	1.537	1.541	1.541	1.523		
(% of the 3)	28%	28%	28%	28%		
Enfermeras	1.341	1.295	1.281	1.261		
(% of the 3)	24%	24%	24%	23%		
Aux. Enf.	2.617	2.636	2.635	2.635		
(% of the 3)	48%	48%	48%	48%		
Los Tres	5.495	5.472	5.457	5.419		
(% of total)	46.0%	46.0%	46.0%	45.8%		
Total	11.934	11.891	11.867	11.827		
(% change)	(1.9%)	(-0.4%)	(-0.2%)	(-0.3%)		

* Does not include contracted labor or health board positions.

Sources: Salud Pública en Cifras and Memorias, various years, computed from Cuadro: Recursos de Personal...

If the division of labor within the medical team had remained constant over the 1975 to 1984 period, and the MOH clientele-to-provider ratio, as well as the productivity of the MOH providers, had remained constant, then the skill-intensity and hence personnel-related costs of the average MOH-provided medical care consultation would have increased. These conditions, however, were not met, ~~as is readily evident when juxtaposing Exhibits XXIV and XXV.~~ The population of El Salvador has grown more rapidly in the past 10 years than has the number of these three provider-types. Moreover, the distribution of the increases in the population and in the three provider-types has been uneven. This has, in turn, encouraged an apparent change in the division of labor between these three personnel types. This is evidenced by (1) the marked increase in the number of "medical" care visits provided by nurses and auxiliaries and (2) the marked inter-regional disparities in the activities of these three classes of personnel, in both qualitative and quantitative terms.

Looking first to variations by health region, ~~from Exhibit XXVI it is evident that~~ the type of medical care personnel who attend most births in any particular region varies widely by region. This is probably primarily due to the variations in the distribution of personnel types. Perhaps related to this finding of (de facto or deliberate) delegation is the finding that nurses and auxiliaries are now carrying out a significantly increasing number of additional—primarily maternal and child health-related—activities. ~~It is possible that this is (at least in part) a statistical artifact—a change that is in fact only a change in the way the numbers are reported to the MOH Department of Statistics. This does not, however, appear to be the case. *~~

* The way in which the reporting forms used by the centers, units, and posts (there is one for the units and posts, and another for the centers) have been changed, however, is such as to make it more difficult to note these new developments. The facilities and the Department of Statistics have both followed a pattern of increasing the level of aggregation of these data, so that only by tracing back to original documents (to the regional reports and in some cases to the individual facilities) can the full extent of the changing distribution of these types of health care activities being performed by different personnel types be fully ascertained.

In an interview, the Director of the Department of Statistics in MOH explained that the Ministry's publications on health care provision and utilization (viz., Salud Publica en Cifras and Memorias) had to be careful to label the medical care provided by nurses and auxiliaries as something different from that which was attributed to physicians, because "the doctors" objected strenuously to having the services they provided compared directly to those provided by non-physicians.

Another very important point he made during the interview was that the data sent to the Department were provided to them by each of the Regional Health Services offices. He maintained that he could not be absolutely certain how good or how bad the information was, but left the distinct impression that he did not have a great deal of confidence in its quality. This must be borne in mind throughout this discussion, and was another factor encouraging the development of a relatively long time series of the various statistics used. It is hoped that the biases, inconsistencies, and inaccuracies, which indubitably exist, will have more of a tendency to "wash out" over a longer period of time.

EXHIBIT XXIV

CHANGES IN THE NUMBER OF
PARTICULAR MEDICAL CARE PROVIDER TYPE AND THE
TOTAL REGIONAL SERVICES PERSONNEL POSITIONS
(IN PERCENTAGES)

<u>YEAR</u>	<u>TOTAL</u>	<u>DOCTORS</u>	<u>NURSES</u>	<u>AUXILIARIES</u>	<u>ARS</u>	<u>(1)+(2)+(3)*</u>	<u>RELATIVE GROWTH RATES **</u>
1975-76	6.3	8.9	0.5	(-7.4)		(-1.6)	(-.3)
1976-77	11.3	10.8	16.4	12.4		12.9	1.1
1977-78	7.0	9.1	11.6	10.9		10.6	1.5
1978-79	4.1	0.2	(-0.5)	(-0.7)		(-0.4)	(-.1)
1979-80	4.4	17.7	1.6	3.5		6.7	1.5
1980-81	1.9	(-1.6)	1.0	1.3	(-36.6)	0.4	0.2
1981-82	(-0.4)	0.3	(-3.4)	0.7	52.1	(-0.4)	1.0
1982-83	(-0.2)	0.8	(-1.1)	0.1	(- 6.5)	(-0.3)	0.7
1983-84	(-0.3)	(-1.9)	(-1.6)	(-0.2)	0.4	(-0.7)	0.4
1984-85					6.4		

* This percentage is derived from changes in the sum of the number of each of these personnel types, and is not a simple average (mean) of the three individual rates.

** This is a measure of the relative rates of increase in the numbers of doctors, nurses and nurse auxiliaries compared to all regional services personnel. If the rates of increase are identical the value in the column is equal to one. If doctors, nurses and auxiliaries' expanded at a slower than the total staff the value is less than one.

Source: Computed from Tables.

EXHIBIT XXV
THE POPULATION OF EL SALVADOR*

<u>YEAR</u>	<u>POPULATION</u>
1975	3.924.000
1976	4.068.000
1977	4.217.000
1978	4.372.000
1979	4.444.000
1980	4.514.000
1981	4.568.000
1982	4.623.000
1983	4.678.000
1984	4.730.000
1985	4.787.000

Source: Encuesta Nacional de Salud Familiar (FESAL-1985)
Informe Final Asociación Demográfica Salvadoreña,
Institute for Resource Development of Westinghouse,
Investigaciones de Población y Mercado, Mayo 1986.

EXHIBIT XXVI
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BIRTH ATTENDANTS BY TYPE OF PERSONNEL & REGION

1981

	<u>COUNTRY</u>	<u>OCCIDENTAL</u>	<u>CENTRAL</u>	<u>METROPOLITAN</u>	<u>PARA CENTRAL</u>	<u>ORIENTAL</u>
Doctor	35.262	5.859	3.150	20.243	2.969	3.041
	69%	52%	82%	99.5%	45%	33%
W/O Metro	49%					
Nurse	7.205	2.511	589	105	1.170	2.830
	14%	22%	15%	0.5%	18%	31%
W/O Metro	23%					
Nurse Auxiliary	8.711	2.828	96	1	2.518	3.268
	17%	25%	3%	0.0%	38%	36%
W/O Metro	28%					
Total	51.178	11.198	3.835	20.349	6.657	9.139

1982

Doctor	34.472	6.084	2.992	20.675	2.018	2.703
	67%	52%	79%	99.6%	32%	30%
W/O Metro	45%					
Nurse	7.824	2.547	501	73	1.739	2.964
	15%	22%	13%	0.4%	28%	33%
W/O Metro	25%					
Nurse Auxiliary	9.212	3.091	293	5	2.541	3.282
	18%	26%	8%	0.0%	40%	37%
W/O Metro	30%					
Total	51.508	11.722	3.786	20.753	6.298	8.949

Source: Informes de las Actividades Mensuales, MSPAS, 1981-1985.

EXHIBIT XXVI

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BIRTH ATTENDANTS BY TYPE OF PERSONNEL & REGION

1983

	<u>COUNTRY</u>	<u>OCCIDENTAL</u>	<u>CENTRAL</u>	<u>METROPOLITAN</u>	<u>PARACENTRAL</u>	<u>ORIENTAL</u>
Doctor	33.964	5.901	2.815	20.771	1.853	2.624
	68%	52%	81%	99.5%	33%	31%
W/O Metro	45%					
Nurse	8.118	2.613	452	82	2.001	2.970
	16%	23%	13%	0.4%	35%	35%
W/O Metro	28%					
Nurse Auxiliary	7.884	2.856	192	13	1.832	2.991
	16%	25%	6%	0.1%	32%	35%
W/O Metro	27%					
T O T A L	49.966	11.370	3.459	20.866	5.686	8.585

1984

Doctor	33.858	5.483	2.933	20.542	2.032	2.868
	69%	50%	81%	99.8%	36%	34%
W/O Metro	46%					
Nurse	7.753	2.452	595	44	1.969	2.693
	16%	22%	16%	0.2%	35%	32%
W/O Metro	27%					
Nurse Auxiliary	7.649	3.026	98	6	1.600	2.919
	26%	28%	3%	0.03%	29%	34%
W/O Metro	27%					
T O T A L	49.260	10.961	3.626	20.592	5.601	8.480

1985

Doctor	35.233
	69%
Nurse	8.135
	16%
Nurse Auxiliary	7.356
	15%
T O T A L	50.724

B. EVOLUTION OF THE REGIONAL OFFICE STAFF PERSONNEL AND SALARIES

Exhibit XXVIII presents information on the changing regional office staff personnel and salaries from 1975 until 1986. At the beginning of the period of study, 1975, each of the five regional health offices' staffs consisted of six positions: (1) a regional director, (2) a regional sub-director, (3) a regional medical supervisor, (4) an epidemiological supervisor, (5) a regional health engineer, and (6) a regional dentistry supervisor. While the size of the staff remained constant (at six) from 1975 until 1982, their combined salaries grew 32 percent (in nominal terms).

In 1983, the first change (since the start of this period, 1975) in regional office staffing patterns was implemented. This consisted, in all five regions, of the addition of a second medical supervisor. In the following year, 1984, further changes occurred. Four more positions were added in each region. These were designed and intended to begin the implementation of the decentralization scheme (see team member Irene Boostrom's report for details of the plan). With the exception of the Metropolitan Region, all five regions added an administrative manager, a chief of human resources, a chief of financial accounting, and a regional medical supervisor for the maternal and family planning programs. These changes increased the number of regional office staff positions from seven to 11, and increased salary outlays of the offices by 45 percent, each of which now totaled 21,145 colones per month (274,885 annually, including routine bonuses).

In early 1986, the decentralization design prompted further additions to the regional offices' staffs. The 1986 changes were less uniform across regions than any of the others introduced up until that time. As in 1984, the Metropolitan Region changed the least: it introduced a regional chief for social pediatrics and nutrition (the first alteration in its regional office employment structure since the start of the period). All of the other regions likewise added such a position to their central offices, and created two additional positions as well: a chief and an assistant for regional accounting. Two regions, Oriente and Occidente, also added two additional accounting assistants. As of January 1986, the "average" regional office staff consisted of 14 positions, with an annual payroll of 369,525 colones.

C. CHANGING LEVELS OF REMUNERATION

As already noted, there is a need for two different perspectives on the relationship of salaries to prices and costs. From the medical personnel perspective the relevant consideration is what is happening to the general level of consumer prices; i.e., to the purchasing power of their income. Here the relevant index to analyze is the consumer price index (CPI). This is what may be termed the labor supply consideration, or the worker-motivation/effort consideration. On the other side of the labor market is the MOH, which hires (demands) a variety of different types of personnel, in different quantities, to perform a variety of tasks. These are what will be termed the labor demand considerations.

Turning first to labor supply considerations, the general trend of the level of real remuneration is clearly a downward one (see Exhibit XXIX). Doctors have fared the worst with regard to the degree of erosion of the real level of remuneration. MOH physicians (specifically those who are contracted to work two hours per day solely for the purpose of providing medical care services, as opposed to

EXHIBIT XXVIII

**EVOLUTION OF REGIONAL OFFICE STAFF
PERSONNEL AND MONTHLY SALARIES**

REGIONAL OFFICE STAFF POSITION	1975	1976	1977	1978	1979	1980	1981
1. Director Regional de Salud	1.750	1.950	2.050	2.140	2.140	2.215	2.215
2. Sub-director Regional de Salud	1.650	1.850	1.945	2.035	2.035	2.110	2.110
3. Médico Supervisor Regional	1.500	1.850	1.945	2.035	2.035	2.110	2.110
4. Médico Epidemiólogo Supervisor	1.500	1.850	1.945	2.035	2.035	2.110	2.100
5. Ingeniero Regional de Salud	1.500	1.690	1.775	1.865	1.865	1.940	1.940
6. Odontólogo Supervisor Regional de Salud	1.500	1.690	1.775	1.865	1.865	1.940	1.940
Total Regional Office Salary	9.400	10.880	11.435	11.975	11.975	12.425	12.425
	1982	1983	1984	1985	1986		
1.	2.215	2.215	2.215	2.345	2.445		
2.	2.110	2.110	2.110	2.240	2.340		
3.	2.110	2.110	2.110	2.240	2.340		
4.	2.110	2.110	2.110	2.240	2.340		
5.	1.940	1.940	1.940	2.070	2.170		
6.	1.940	1.940	1.940	2.070	2.170		
7. Médico Supervisor Regional	NE	2.110	2.110	2.240	2.340		
8. Médico Supervisor Regional del Programa Materno y Planificación Familiar	NE	NE	2.110	2.240	2.340		
9. Gerente Administrativo	NE	NE	1.800	1.930	1.030		
10. Jefe de Recursos Humanos	NE	NE	1.500	1.630	1.730		
11. Jefe Financiero Contable	NE	NE	1.200	1.330	1.480		
12. Jefe Regional de Pediatría Social y Nutrición	NE	NE	NE	NE	2.340		
13. Jefe de Auditoría Regional	NE	NE	NE	NE	1.280		
14. Auxiliar de Auditoría Regional	NE	NE	NE	NE	1.080		
Total Regional Office Salaries	12.425	14.535	21.145	22.575	28.425		

The 1984 addition of 4 regional office positions was common to all 5 regional offices, with the exception of the Metropolitan Region, which did not add any.

NE = Non-existent, i.e., subsequently developed/created position.

EXHIBIT XXIX

**REGIONAL HEALTH SERVICES PERSONNEL REMUNERATION:
MONTHLY SALARIES
(IN CONSTANT 1978 COLONES)***

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
Doctors (2 hrs/day)	615.4	626.6	584.1	536.1	478.4	423.2
Nurse	531.5	574.4	543.2	530.9	713.0	607.4
Nurse Auxiliary	349.7	378.6	379.7	376.3	483.0	411.4
Sanitary Inspector	433.6	489.6	455.6	469.1	464.6	419.3
	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	
Doctors (2 hrs/day)	368.9	330.1	291.7	261.2	225.8	
Nurse	570.4	510.4	451.1	404.0	382.5	
Nurse Auxiliary	358.6	397.3	351.2	314.5	309.0	
Sanitary Inspector	365.4	348.4	307.9	275.8	277.3	
ARS Supervisor	N/A	348.4	307.9	275.8	277.3	

* These are CPI based adjustments.

administrative duties) experienced a fall in their purchasing power of nearly two thirds between 1975 and 1985.

The pattern of the movement of their salary has been the most consistent of those ~~of medical personnel in general. All four of the positions for which data are presented in Exhibit XXX,~~ part-time physicians, nurses, nurse auxiliaries, and sanitary inspectors, experienced increases in their real remuneration level in 1976 relative to 1975 the doctors experiencing by far the smallest. In subsequent years, the doctors' position eroded at about the same or—more commonly—at a faster rate than that of the other personnel types in each year.

Since 1978 part-time MOH physicians have suffered an average annual reduction in their real salary of about 11 percent. The levels of real income for the other three types of personnel are not nearly as consistent. Their general erosion has been periodically slowed, and occasionally—much more frequently earlier in the decade—the downward trend was temporarily reversed. Considered as three individual categories of workers, in no year have nurses, nurse auxiliaries, ~~or sanitary inspectors~~ experienced as large a drop in their MOH-derived income as have physicians.

The cumulative effect of these trends has been least for nurse auxiliaries. As a group, they have experienced a rate of decrease in their real income of about one-fifth the level of doctors. The ratio of doctor to auxiliary salaries has fallen markedly from 1.76 to 0.81 over the 1975 to 1985 period.

From a labor market perspective, how might these data be interpreted? What are the likely causes and effects of these trends on the labor supply side, i.e., on the willingness and ability of physicians, nurses, and auxiliaries to seek employment with the MOH, and, having obtained or retained such a position, what might be their causes and effects for the level of effort put forth by the physicians, nurses, and auxiliaries?

First looking at the supply side of the market, the market signals being sent to physicians are unambivalent. Physicians have been increasingly discouraged from entering MOH service (at least on a medical service/consultation provision-only basis). Unfortunately, it is impossible to ascertain what the actual impact of these signals has been, without additional information about (a) physician knowledge, attitudes, and practices concerning their job market (present and future, public and private); (b) the size and nature of the private medical care sector; and (c) a consideration that overlaps with both of the preceding points, the activities and plans of international donor agencies in El Salvador.

These are three exceedingly important topics about which there is virtually no systematic information. This void precludes a full understanding of how the entire (public and private) medical care system in El Salvador functions: what its various agents are doing, what they believe their own and other actors' responsibilities to be, the extent to which their activities overlap, and how they interact and affect one another—consciously and unconsciously. With only a partial picture, it is impossible to fully understand the health care delivery "system" of El Salvador, or to be able to model it with any significant degree of accuracy. Hence, health sector planning, in particular, is severely crippled; and, on a more general level, the quality of public health policy analysis and decision-making remains far below its potential. Analysis, by default, must be based on partial and anecdotal

EXHIBIT XXX

**CHANGES IN REAL SALARIES, 1975-1985
(CPI-base adjustment)**

	<u>1975-1976</u>	<u>1976-1977</u>	<u>1977-1978</u>	<u>1978-1979</u>	<u>1979-1980</u>
Doctors (2 hrs/day)	1.3%	-6.8%	- 8.2%	-10.8%	
Nurse	8.1%	-5.4%	- 2.3%	34 %	
Nurse Auxiliary	8.3%	0.3%	- 0.9%	28.4%	
Sanitary Inspector	12.9%	-6.9%	3.0%	- 0.1%	
	<u>1980-1981</u>	<u>1981-1982</u>	<u>1982-1983</u>	<u>1983-1984</u>	<u>1984-1985</u>
Doctors (2 hrs/day)			-11.6%	-10.5%	-13.6%
Nurse			-11.6%	-10.4%	- 5.4%
Nurse Auxiliary			-11.6%	-10.4%	- 1.7%
Sanitary Inspector			-11.6%	-10.4%	0.5%
ARS Sup.			-11.6%	-10.4%	0.5%
	<u>1975-1979</u>	<u>1975-1980</u>	<u>1980-1985</u>	<u>1979-1985</u>	<u>1975-1985</u>
Doctors	-22.3%			-52.8%	-63.3%
Nurse	+34.1%			-46.4%	-28.1%
Nurse Auxiliary	+38.1%			-36.0%	-11.6%
San. Insp.	+ 7.1%			-40.3%	-36.0%
ARS Sup.					

evidence, in combination with social science theory, common sense, and intuition, all screened through an appreciation and understanding of the socioeconomic, cultural, and general institutional milieu. As such, it is unavoidable that differences in interpretation are oftentimes substantial and can have significant (wide-ranging and long-lasting) implications. This, obviously, is an area that is in dire need of a great deal of additional attention.

Although there is not adequate information to support a definitive analysis, because this is a vitally important public policy issue it is imperative to detail what is known and what may be reasoned through based on partial information (and explicitly recognizing this limitation). The effect of the absolute and relative erosion of the financial position of MOH physicians vis-a-vis other medical team members (both nurses, and especially auxiliaries) has, in all likelihood, dulled the motivation of physicians. This has probably undermined the relative attractiveness for physicians of seeking employment with the MOH.

From the demand-side perspective: what might be the causes and effects of these trends on the willingness and ability of the Ministry of Health to seek the services of these different types of medical care personnel? It is likely that the absolute and relative erosion of the financial position of physicians has vitiated the incentives of those physicians already working for the Ministry. This is likely to be one of the considerations that prompted the introduction and effective enforcement of minimum work effort norms/requirements for MOH-employed physicians: they are required to provide an average of six consultas per hour.

The degree of impact of the physicians' relatively greater financial slide is in large part a question of the Ministry of Health's dynamic and transactional relationship with the private sector. Unfortunately, the dearth of information about the private sector in general, and specifically the private physician market, effectively occludes even an initial estimate of the magnitude of that impact. One fact that is known is that the Government has (for at least the past six years) established maximum prices physicians can charge. A two-tiered pricing policy set a ceiling price on a visit to a generalist at 20 colones, and to a specialist at 30 colones. These rates were revised in January 1986 to 30 and 40 colones, respectively.

In informal discussions with Salvadorans from a variety of backgrounds and economic statuses it was learned that not only was the maximum price not the effective price (i.e., the one that is actually charged), but that the intended effect of this legislation has largely gone unrealized because of a variety of tactical devices private physicians have adopted. Most commonly mentioned is the practice of labeling each individual procedure the physician performs a separate consulta, and charging the patient accordingly.

At first glance, the fact that the establishment of a ceiling price would give rise to an innovative permutation of a black market would seem to suggest that the good or service in question is in short supply relative to demand, and thus underpriced—presumably because of the Government's interference in the market.

This, however, is not the case in the physician services market of El Salvador, or any other country where the market is allowed to function to any significant degree in determining the prices that are paid to physicians on a fee-for-service basis. It is well known that the medical care market has a number of distinct, and

in many cases unique, characteristics. Most relevant to this discussion are the high level of consumer (patient) ignorance about the appropriate treatment procedures, the availability of alternative providers/facilities, and the relative prices of both alternative procedures and providers; the ability of physicians to manipulate (increase) demand (via what economists would label "changing tastes") by, for instance, scheduling an unnecessary but patient-reassuring follow-up visit "to see how you are doing"; the practice of judging quality by price; and the distortions in behavioral patterns resulting from distorted (non-efficiency-related) pricing policies (i.e., setting prices for goods or services at levels that have little or no relationship to the costs of producing or delivering those goods or services). Because of these characteristics it is possible that even in a market with a relative oversupply of physicians, the price of physician services can continue to increase.

The market price for physician services can continue to increase because the aforementioned market abnormalities allow/enable physicians to increase the market demand. This scenario presumes that at least some physicians, acting on their own as individual agents (motivated, for example, by the desire to achieve some targeted income level), are continuously involved in an ever-dynamic, assessment-adjustment process. Through the processes of their "price leadership" effect and the aggregation of the individual physician behavioral patterns, their assessment-adjustment process comes to affect the entire physician services market.

The conventional wisdom in El Salvador holds that there is an excess of physicians, particularly in the capital. That physicians turn at all to the Ministry of Health for employment, it is said, is (1) to develop a clientele upon graduation from medical school, (2) to augment their private practice-derived income with a more secure, albeit relatively low-paying "regular" job, and, less frequently mentioned, (3) because of a personal commitment to public service.

Since a large (but unknown) proportion of all practicing physicians in El Salvador works on at least a part-time basis for the Ministry of Health (Shuftan and Correa 1985), it is possible that the absolute and relative decline in the real purchasing power of physicians' MOH-derived income has (via the mechanisms described above) contributed to upward pressure on their private practice prices.

It is also possible that declining physician compensation has contributed to both the absolute and relative declines in their productivity levels. Despite the fact that the relative position share of physicians vis-a-vis nurses and auxiliaries has increased a small amount in recent years, the share of total medical care consultations provided by physicians has fallen (see Exhibit XXXI). Moreover, the average number of man-hours worked per physician increased by 7 percent between 1979 and 1985 (data from Alens 1986, pp. 49-50). Thus the decline in physician productivity has been even greater than suggested by the output per position data. Furthermore, despite the fact that the last decade has witnessed a significant expansion in the number of health centers and especially health units, which have traditionally been directed by a part-time physician (for two to four hours per day), the number of physicians serving as directors of centers and units has remained relatively constant. It may be deduced that non-physicians are increasingly serving as directors of such facilities. By implication, it may be inferred that the percent of MOH physicians in Regional Health Services who are providing medical care services (as opposed to filling administrative positions) has

EXHIBIT XXXI

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TOTAL MEDICAL CARE VISITS BY
TYPE OF MEDICAL CARE PROVIDER *

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Doctors (% of total)	1.594.089 (85.2%)	1.712.490 (88.8%)	1.818.214 (92.7%)	1.846.938 (88.1%)	1.928.898 (85.6%)
Nurse (% of total)	178.134 (9.5%)	94.861 (4.9%)	77.082 (3.9%)	116.438 (5.6%)	159.679 (7.1%)
Nurse Auxiliaries (% of total)	98.782 (5.3%)	121.122 (6.3%)	93.533 (4.8%)	133.926 (6.4%)	163.868 (7.3%)
Total (% annual growth)	1.871.005	1.928.473 3.1%	1.962.311 1.8%	2.095.774 6.8%	2.252.445 7.5%

* Includes emergency visits/treatment.

Source: Salud Pública en Cifras, various years; Memorias, various years, MSPAS.

EXHIBIT XXXI
Page 2 Of 2

TOTAL MEDICAL CARE VISITS BY TYPE OF MEDICAL CARE PROVIDER*

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Doctor (% of total)	2.129.545 (79.6%)	2.470.927 (80.1%)	2.494.986 (74.8%)	2.853.442 (70.3%)	2.531.492 (72.5%)	2.860.890 (77.3%)	2.620.628 (76.3%)	2.600.991 (70.2%)	2.883.818 (74.2%)
Nurse (% of total)	342.210 (12.8%)	394.740 (12.8%)	459.912 (13.8%)	485.484 (12.0%)	489.802 (14.0%)	494.682 (13.4%)	360.241 (10.5%)	642.297 (17.3%)	602.804 (15.5%)
Nurse Auxiliary (% of total)	183.901 (6.9%)	142.911 (4.6%)	135.677 (4.1%)	141.770 (3.5%)	160.100 (4.6%)	157.054 (4.2%)	226.138 (6.6%)	231.181 (6.2%)	178.327 (4.6%)
ARS (% of total)	20.800 (0.78%)	76.696 (2.5%)	243.233 (7.3%)	435.039 (10.7%)	311.619 (8.9%)	188.400 (5.1%)	226.263 (6.6%)	229.975 (6.2%)	222.044 (5.7%)
Total [% growth]	2.676.456	3.085.274	3.333.808	4.057.505	3.493.013	3.701.026	3.433.270	3.704.444	3.886.993
With ARS:	18.8%	15.3%	8.1%	21.7%	-16.2%	6.0%	-7.2%	7.9%	4.9%
Excluding ARS:	17.9%	13.3%	2.7%	17.2%	-12.2%	10.4%	-8.7%	8.3%	5.5%

* Includes Emergency visits/treatments.

Sources: Computed from "Cuadro: Cobertura de la Asistencia Ambulatoria", Salud Pública en Cifras, various years, Memorias, various years, MSPAS.

increased concomitantly as the number of MOH Regional Health Service physicians has increased. This, in turn, would lead one to expect that the average productivity of physicians is increasing because as a group they are health care provision-intensive. But, as has been pointed out, this, in fact, has not been the case.

A very legitimate question that may be raised with regard to this entire discussion is whether the chicken or the egg came first. That is, was it in fact productivity that first fell off, and was it falling physician productivity that prompted the Ministry to withhold the reward (or levy the penalty) of relatively constant nominal wage levels? Or, alternatively, is the ordering of the scenario as has been described here more accurate? That is, did falling real wage levels prompt (through the various mechanisms that have been suggested here) a drop in productivity?

There are two levels of responses to this question. First, tracing the time paths of the productivity series and the real and nominal wage series leads one fairly unambiguously to the conclusion that the fall in productivity was a response (an effect), and that the fall in real wages was the cause.

But the question may also be answered on a very different level. The question implicitly makes two assumptions: if falling physician productivity was the cause of the fall in wages, it assumes first that the MOH would have to be cognizant of that fall, and second, that it would then act on that information in such a way as to very demonstrably reprimand the physicians financially. Neither of these assumptions is warranted. To date, with the exception of a study conducted on the Ayudantes Rurales en Salud (ARS) with the assistance of USAID/ES (Rubin et al., 1983), to our knowledge the MOH has not used its database to analyze the productivity or efficiency of its services. Second, given the political clout of physicians in El Salvador and their prevalence in powerful administrative positions in the Ministry of Health itself, it is unlikely that the MOH would take such a deliberate and antagonistic swipe at the profession.

D. "PRODUCTIVITY" ANALYSIS: CHANGING LEVELS OF VISITS PER PROVIDER

Let us take a closer look at the changing levels of productivity by personnel type over the last decade. We can improve on some of the basic measures that have been discussed up to this point. To control for one of the variations that has complicated the picture to this point—the increased number of work hours per position—the number of FTE physicians was computed from 1975 to 1985. A type of productivity measure—an average number of consultations per physician FTE—was computed. Similar measures were computed for all non-physicians, non-nurses, and for non-auxiliaries; and for (a) nurses, (b) auxiliaries, and, (c) all remaining regional position types (considered together) as well. These data are presented in Exhibit XXXII. To be better able to discern what has been happening to the changing relative numbers of physicians, nurses, and auxiliaries, the shares of each of these three personnel types in the medical care team is presented in Exhibit XXXIII for 1975 to 1984. Exhibits XXXIV through XXXVI present the average annual productivity levels for physicians, nurses, and nurse auxiliaries by health region from 1975 to 1984. Juxtaposing Exhibits XXXIV and XXXV, reveals that as the average productivity of physicians has fallen off markedly and fairly

EXHIBIT XXXII

TOTAL FTE REGIONAL POSITIONS, 1975-84*

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
(1) Doctors	819.4	899.4	1.009.5	1.065.25	1.103.8
(2) Nurses	927	937.5	1.054.5	1.227	1.307
(3) Nurses Auxiliaries	2.115	1.998	1.998	2.466	2.496
(1)+(2)+(3)	3.861.4	3.834.9	4.062	4.758.3	4.911.5
All Others	4.320.5	4.893.75	5.415	5.627	6.090
Total	8.181.9	8.728.7	9.477	10.305.3	11.001.5

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
(1) Doctors	1.333.3	1.336.8	1.305	1.317.5	1.302
(2) Nurses	1.328	1.341	1.295	1.281	1.261
(3) Nurses Auxiliaries	2.584	2.617	2.636	2.639	2.635
(1)+(2)+(3)	5.245.3	5.295	5.236	5.237.5	5.198
All Others	6.192	6.385	6.366	6.359	6.357
Total	11.437	11.680	11.602	11.596.5	11.555

* Does not include limited contract labor or health board positions

Source: Computed from data on positions in Salud Pública en Cifras and Memorias and from data on hours by position from Ley de Salarios, various years.

EXHIBIT XXXIII

PERCENT OF FTE DOCTORS, NURSES AND NURSE AUXILIARIES

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
Doctors	21%	23%	25%	22%	23%	25%
Nurses	24%	24%	26%	26%	27%	25%
Nurse Auxiliaries	55%	52%	49%	52%	51%	49%
Total:	100%	99%	100%	100%	101%	49%

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Doctors	25%	25%	25%	25%
Nurses	25%	25%	24%	24%
Nurse Auxiliaries	49%	50%	50%	51%
Total:	99%	100%	99%	100%

Computed From EXHIBIT 32

EXHIBIT XXXIV

OUTPUT/PRODUCTIVITY OF DOCTORS, BY REGION, 1975-1984
(FTE DOCTORS)

Year	Country	Occidental	Central	Metropolitan	Paracentral	Oriental
1975	2,064	1,598	2,690	1,874	2,304	2,976
1976	2,090	1,553	2,407	1,912	2,635	2,806
1977	2,181	1,644	2,358	2,153	2,377	2,625
1978	2,082	1,615	2,660	1,988	2,150	2,455
1979	2,157	1,631	2,934	1,845	2,471	2,704
1980	1,676	1,319	2,326	1,580	1,944	2,197
1981	1,892	1,376	2,549	1,620	2,159	2,577
1982	1,792	1,670	2,450	1,604	2,043	1,801
1983	1,667	1,609	2,130	1,663	1,688	1,442
1984	1,881	1,765	2,359	1,738	2,163	1,871

EXHIBIT XXXV

NURSE OUTPUT/PRODUCTIVITY, BY REGION, 1975-1984
(FTE NURSES)

<u>Year</u>	<u>Country</u>	<u>Occidental</u>	<u>Central</u>	<u>Metropolitan</u>	<u>Paracentral</u>	<u>Oriental</u>
1975	165	215	543	33	81	358
1976	358	416	767	174	319	607
1977	369	387	585	213	339	583
1978	369	358	528	206	392	556
1979	367	377	541	195	383	535
1980	366	364	466	194	421	568
1981	342	339	420	237	358	464
1982	354	339	437	239	392	502
1983	420	365	570	249	596	578
1984	487	421	693	252	721	719

EXHIBIT XXXVI

NURSE AUXILIARY PRODUCTIVITY/OUTPUT BY REGION, 1975-1984
(FTE AUXILIARIES)

<u>YEAR</u>	<u>COUNTRY</u>	<u>OCCIDENTAL</u>	<u>CENTRAL</u>	<u>METROPOLITANA</u>	<u>PARACENTRAL</u>	<u>ORIENTAL</u>
1975	73	16	217	7	112	263
1976	88	24	253	6	133	310
1977	61	37	116	3	88	176
1978	52	36	85	2	82	147
1979	55	37	65	2	76	171
1980	60	27	64	3	93	193
1981	59	29	51	6	90	179
1982	84	32	93	5	95	284
1983	87	33	103	7	135	263

steadily, that of nurses has increased markedly, although not quite as steadily. Differential roles of these three factors may be observed over space (region by region) and over time (they have been slowly evolving). But what this development portrays in terms of our crude measure of "productivity" is that physicians as a group are becoming less "productive," which may or may not be the case. Recognizing that they may be appropriately delegating some duties to subordinates, the falling number of consultas per physician (see Exhibit XXXIV) may mean that physicians are spending more time on relatively more difficult and complex cases. Hence this development may reflect an improvement in the quality of care being delivered. The "productivity" measure we have developed does not take into account the quality of care provided or the changing case mix, and thus is useless in trying to sort through these possibilities.

Again, we have identified an important information void that hampers understanding of the possible causes and consequences of some of the changes that have been occurring in MOH service delivery patterns. What has prompted this change in the division of labor of the medical care team? Because the relative number of consultas per individual physician, nurse, and auxiliary has been changing (as shown in Exhibits XXXIV, XXXV, and XXXVI) this is an important question to be able to answer accurately. Given the low levels of nurse-to-physician and auxiliary-to-physician staffing patterns, these developments are hard to explain. The relative scarcity of these less-skilled provider types would suggest that they are already burdened with a disproportionately large amount of work just trying to carry out their "normal" duties. One would not expect them, therefore, to be performing new tasks. If, after accounting for changes in the delegation of duties and the case mix, a substantial differential productivity growth remains, a detailed analysis would be in order. The reason for the relative improvement in the "productivity" of nurses and auxiliaries, and the fall of that of physicians, has important policy implications for improving the efficiency of the composition of the Ministry's health manpower team. The almost inverse relationship between the cost of these provider types and their productivity trends underscores the potential efficiency gains to be realized. Still, as the magnitudes involved are unknown, they will require detailed analysis.

SECTION SIX

THE MINISTRY OF HEALTH'S FINANCIAL FUTURE

VI. THE MINISTRY OF HEALTH'S FINANCIAL FUTURE

A. BUDGETARY PROJECTIONS THROUGH 1991

(1) Relevant Data

The decade-long trend of the MOH share of the Central Government budget, graphically portrayed in Exhibit II, and presented in tabular form in Exhibit XXXVII, suggests that the MOH's share has been on the decline, and at a fairly constant rate. In and of itself, this finding does not provide *prima facie* evidence of an MOH financial crisis. The measure is useful only as a partial indicator. It is also useful for purposes of making MOH funding projections. Given estimates of future levels of the total government budget, the development of some first estimates of concurrent MOH funding levels is a relatively straightforward procedure.

Yet often, and certainly in the volatile situation that currently exists in El Salvador, this may not be adequate. To estimate the Central Government's budget for some relatively near future year may simply be prone to too great a degree of error to be of much value.

There is, however, an intermediate step that would be useful to take first, before proceeding with the MOH budget estimate. This intermediate step consists of developing another series of another partial indicator of MOH funding: the MOH level of funding relative to GDP. As a percentage of GDP, the Ministry's budget is not likely to constitute a very large portion, nor is it likely to vary a great deal, since GDP is such a large number relative to the MOH budget; changes in the absolute level of the MOH budget are likely to be dwarfed in this relative measure. Exhibit XXXVIII presents this information covering the 1976 to 1986 period, and attests to this fundamental mathematical relationship.

In the development of an estimate of the future MOH budget allocation it would be best to use both of these measures: that is, both the MOH budget as a percentage of GDP and as a percentage of the Central Government budget, each based on an analysis of its long-term trends. It is most unlikely that these two approaches will provide identical forecasts. Yet, because each focuses more closely on a different relevant indicator, each has its own merits. As noted earlier, GDP is important to take into account because it is a measure of the country's income and/or the ability to pay, considered as an economic unit. The Central Government's share in the economy is important to take into account both quantitatively and qualitatively because it is a more immediate indicator of the level of monies that it has at its disposal to allocate to health (and all other Ministries), and because it serves as a proxy measure, simultaneously for both the Government's commitment to health and the relative political power of the MOH and its advocates and allies.

An estimate embodying information from both of these measures, therefore, is likely to be a more accurate and more robust measure than an estimate based on only one of them.

EXHIBIT XXXVII

EVOLUTION OF THE MOH SHARE OF THE
TOTAL CENTRAL GOVERNMENT BUDGET ALLOCATION
AND EXPENDITURES

<u>YEAR</u>	<u>SHARE OF BUDGET ALLOCATION</u>	<u>SHARE OF EXPENDITURES</u>
1975		
1976	10.6%	10.7%
1977	10.1%	10.2%
1978	10.7%	10.7%
1979	9.7%	9.8%
1980	10.6%	10.8%
1981	8.6%	8.7%
1982	8.1%	8.5%
1983	8.1%	9.2%
1984	7.2%	7.0%
1985	7.6%	7.5%
1986	7.1%	

Source: Informe Complementario Constitucional sobre la
Hacienda Pública, Ejercicio Fiscal, various years.

EXHIBIT XXXVIII

EVOLUTION OF THE MOH BUDGET ALLOCATION
AS A PERCENT OF GROSS NATIONAL PRODUCT

<u>YEAR</u>	<u>PERCENT</u>
1975	1.80%
1976	1.75%
1977	1.79%
1978	1.93%
1979	1.71%
1980	2.09%
1981	2.17%
1982	2.01%
1983	1.76%
1984	1.87%
1985	1.41%

ANNUAL AVERAGES:	1975-1979:	1.796
	1980-1982:	2.09
	1983-1985:	1.68

Source: Informe Complementario Constitucional,
Ministerio de Hacienda, various years.

In addition, because the Central Government budget of El Salvador is primarily developed by line item extrapolations, looking directly at the level of the MOH's budget allocation trends over time is also likely to provide useful information about what the future may bring. After obtaining their individual estimates, the measures may be examined simultaneously, and a type of rudimentary sensitivity analysis performed to gauge the extent of their overlap.

(2) Analytical Techniques

The most commonly used forecasting techniques (e.g., trend analysis or linear extrapolations) are based on a key assumption: that the structure of the world has not changed, or if it has, it has not done so appreciably or in any discernible, systematic fashion. Clearly this assumption has been violated. In El Salvador, both the economy and the Central Government's role in Salvadoran society have changed markedly in the last six years. Specifically:

- o The war has generated abrupt increases in the levels of funding for the Ministry of Defense and the Ministry of Interior, often at the price of decreasing absolute and relative shares for other Ministries.
- o The base of the economy—agro-export—has been permanently altered by both war and agrarian reform. The output levels of the traditional major crops—coffee, cotton, and sugar—are not expected to regain their pre-1979 levels in the near future.
- o Capital flight, universally acknowledged to be of prodigious, though unquantified, proportions, coupled with continuing industrial and infrastructural sabotage (unofficially estimated to have totaled 1.45 billion colones at the end of 1985), have both drained the country of much of what otherwise would have been its innate reconstruction/investment potential, while simultaneously creating the need for more.
- o The manufacturing sector's output fell by 30 percent and its employment level by nearly 20 percent between 1979 and 1982. Both are only very slowly starting to recover. By late 1985, idle industrial capacity still hovered near 70 percent.
- o The tax structure has changed dramatically, becoming more onerous for the average low-income Salvadoran as sales taxes have increased from 8 percent of total taxes to more than one-quarter in the space of seven years (see Exhibit XXXIX).
- o The Government has nationalized the banks and established agricultural marketing boards and a monopoly on foreign trade.

Given the magnitude of these structural changes, it should hardly be surprising that some of the chief economic indicators have oftentimes fluctuated wildly in the recent past. For instance, Central Government expenditures and commitments increased 47.6 percent from 1983 to 1984 (computed from data on page 36, Informe Complementario Constitucional, Ejercicio Fiscal, 1985, Ministry of Hacienda, 1986). The simple extrapolation of past trends in such cases is likely to produce serious forecasting errors.

EXHIBIT XXXIX

**THE CHANGING TAX STRUCTURE:
TOTAL TAX REVENUES BY TYPE OF TAX, 1979-1985
(AS PERCENTAGES)**

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
<u>DIRECT TAXES</u>	31.5	23.9	30.0	30.9	28.3	25.2	23.2
A. Income	23.8	16.6	22.8	23.6	21.7	19.8	17.9
B. Property/Land	7.7	7.3	7.2	7.3	6.6	5.4	5.3
<u>INDIRECT TAXES</u>	68.5	76.1	70.0	69.1	71.7	74.8	76.8
A. On Foreign Trade	37.9	49.1	32.6	29.3	25.8	27.6	32.1
1. Imports	10.0	15.3	8.8	8.3	8.3	9.6	10.2
2. Exports	27.9	33.8	23.8	21.0	17.5	18.3	21.9
B. On Consumption	21.0	18.3	21.9	22.9	21.3	18.7	17.6
1. Goods	18.8	16.5	19.1	20.4	19.0	16.6	15.5
2. Services	2.2	1.8	2.7	2.5	2.3	2.1	2.1
C. Levies on Productive and Commercial Activities	0.5	0.4	0.5	0.5	0.5	0.4	0.4
D. Sales Taxes	8.2	7.6	14.3	15.6	23.3	27.4	26.1
E. Others	0.8	0.7	0.7	0.7	0.8	0.6	0.6

Sources: Computed from Informe Complementario Constitucional, Ejercicio Fiscal, 1981-1985, Ministerio de Hacienda, Dirección de Contabilidad Central, 1982-1986.

Fortunately there is a sophisticated, recent study performed by the World Bank that develops estimates for the real rate of growth of GDP (which is the single most important measure necessary to develop some projections of the MOH's budget allocation). These are the estimates used in the development of the projections presented in Exhibit XL.

The key assumptions in the World Bank's "Base Case Scenario" are: (1) that the war continues indefinitely at its present level, (2) that the Central American Common Market (CACM) is not revived,* (3) that El Salvador's terms of trade improve moderately to reach 86 percent of their 1980 level, (4) the financial aid provided by the United States will continue at its present levels through 1988; declining from (all figures are U.S. dollars) \$320 million in 1988, to \$140 million in 1990, and to \$70 million in 1995.**

In the development of the other figures necessary to make projections for the MOH budget—i.e., MOH budget share of GDP and MOH budget share of Central Government budget, and the extrapolation based on past MOH trends—a technique was adopted in the interest of smoothing out what would otherwise have been unrealistically large discontinuities in each of these series. The technique consisted of a two-step process. First a three-year moving average for each data

* The CACM was formerly a major source of demand for El Salvador's exports, and especially its manufactured goods—which are largely uncompetitive elsewhere internationally. The improvement in external terms of trade is assumed to be attributable chiefly to increases in the prices of sugar, cotton, and coffee. In fact, coffee prices soared much higher last year, and resulted in a windfall for the Salvadoran economy, and especially the Central Government. In 1985, the Government established a "temporary" 30 percent ad valorem tax to enable it to claim much of the price differential. The tax was increased another 15 percent in January 1986. The substantial windfalls so earned have enabled the Government to ease the degree of severity of the austerity package it implemented in January 1986, by allowing it to temporarily postpone some of the already planned tax hikes. World Bank estimates, however, predict coffee prices to fall significantly in the next 18 months. Still, this temporary breathing space has certainly been good news for El Salvador: it means that the picture developed here is somewhat overly conservative or pessimistic.

** In an alternative scenario that is developed in the report, Scenario 4, the only change in the assumption underlying the model are that the level of U.S. assistance decreases more rapidly: going from \$320 million in 1985 to \$160 million in 1988, and to \$40 million in 1990. The projections developed through 1995 (i.e., covering the next nine years) predict that the country will not be able to generate an increase in per capita income and consumption growth at any time during this period. In fact, by the very early 1990s—which is what makes this consideration relevant to the present analysis—because of the mounting foreign debt and foreign exchange problems the country will be forced to intentionally slow economic expansion. This would consist of reductions in aggregate demand—including reducing public sector, and presumably also Ministry of Health, expenditures. In that event the scenario developed here would overpredict what would transpire.

EXHIBIT XL
(PAGE 1 OF 2)

COMPUTING MOH BUDGETARY PROJECTIONS
(In Thousands of 1985 Colones)

YEAR	GDP	GOES BUDGET
1986	14,310,233.9	2,633,083.0
1987	14,610,748.8	2,805,263.8
1988	14,932,185.3	2,837,115.2
1989	15,260,693.4	2,869,010.4
1990	15,611,689.3	2,903,774.2
1991	15,870,758.2	2,938,619.5

EXHIBIT XL
(Page 2 Of 2)

Estimated MOH Budget Allocations
in Thousand of Real Colones Base 1985

YEAR	MOH BUDGET			
	<u>As % GDP</u>	<u>As % GOES</u>	<u>Calculated from GDP(b)</u>	<u>Calculated from GOES(a)</u>
1987	1,386	7.41	202,505.0	200,295.8
1988	1,375	7.07	205,317.5	200,584.0
1989	1,363	6.99	208,003.3	200,543.8
1990	1,351	6.91	210,913.9	200,650.8
1991	1,339	6.83	213,848.5	200,707.7
			<u>Calculated from MOH Trends (c)</u>	
		1987	199,542.4	
		1988	202,487.5	
		1989	205,429.5	
		1990	208,371.5	
		1991	211,313.5	

Assumes

GDP real growth rates as estimated in the Base Case Scenario of the World Bank Study and applied to the 1985 GDP level.

GOES share as projected by a linear regression based on three-year moving averages of the GOES expenditures as a share of GDP from 1989 to 1986.

MOH share as projected by a linear regression based on three-year moving averages of (a) the MOH share of GOES expenditures from 1980 to 1986, (b) the MOH share of GDP expenditures from 1980 to 1986, and (c) the total MOH allocations 1980 to 1986.

point of each of the series was substituted in the place of the original data. The second step then consisted of estimating a simple linear regression. Finally, the projections were developed from these regression equations.

The estimates obtained from each of the three techniques are encouragingly similar. It was thought that in the interest of incorporating the advantages of each of these three measures an average (the simple mean) of the three individual series projections for each year would provide the single best point estimate. These projections are presented in Exhibit XLL.

B. ESTIMATING THE MINISTRY'S FUTURE FINANCIAL NEEDS

One theme common to the preceding segments of this paper is that MOH resource allocation over the past decade has been less than optimal, that growing resource constraints are exacerbating the situation, and that this state of affairs is attributable to a complex constellation of factors, some within the control of the MOH, but with others lying outside of its control. Given that (1) large components of the public health care system have long been dysfunctional, (2) portions of the functioning system have been all but (at least financially) eliminated, (3) some aspects of the Ministry—namely the hospitals—have not been circumspectly analyzed, (4) the Five Year National Health Plan offers little in terms of detailing the resource requirements to implement the new programs envisioned, and (5) the dynamic and still evolving decentralization scheme has no definitive blueprint (not even a single descriptive paper has yet been written), any effort to identify MOH program "needs" over the next five years is so subject to errors of judgment (concerning, for instance, each of the points just identified) that the time and energy that might be devoted to the matter would be better spent on the development of a better understanding of where the MOH system is now, and where it has been. This, it is hoped, will enable a better understanding of the MOH as an operating entity—a system—which is the first, most important step in beginning the process of reconciling the persistent and marked discrepancies between goals and objectives as opposed to capabilities and accomplishments.

The level of detail in the analysis of what the MOH is now, and what it has been and done in the last 10 years contained in the first segment of this paper reflects this resource allocation decision. Given the abysmally low level of system analysis and system knowledge of the Ministry, coupled with the length of time since the MOH program has been functioning in anything approaching an acceptable manner in terms of the mix of, on the one hand, drugs, supplies, materials, equipment, and machinery, and, on the other hand, personnel, gaining better understanding of where we have been and where we are now is warranted. Developing estimates of MOH "needs" is a planning activity: it deals with mapping out where we want to go. To successfully plan, which in this particular case is to develop acceptably or usefully accurate estimates of future MOH program needs, clearly requires a knowledge of what the MOH programs presently consist of and have consisted of in the recent past, and presumes that those programs functioned at an acceptable level. These conditions do not exist. Resources spent mapping out a trail from an unknown point of embarkation to a destination point that is not known, but rather is only conceptualized, and even then in only a vague, undelineated manner, is doomed to waste and frustration.

EXHIBIT XLI

**SINGLE BEST MOH BUDGET PROJECTIONS BY YEAR:
MEAN OF THE THREE TECHNIQUES OF PROJECTING THE MOH BUDGET**

YEAR	TOTAL BUDGET ALLOCATIONS (1000's of 195 colnes)
1987	200,781.1
1988	202,796.3
1989	204,658.9
1990	206,645.4
1991	208,623.2

We know that over the last decade, and especially since 1980, the MOH "program" has suffered from a serious shortage of funding. We also know that the intensity of the resource constraint is not likely to abate in the near future. Thus it can and should be readily recognized that there exists a substantial financing gap; that is, the level of resources the MOH has and will have available to it in the next five years is significantly less than what is needed to fully and effectively implement its "program." The relevant questions are: (1) How can more effective use be made of those resources that are available to the MOH? (2) How can the Ministry of Health increase the amount of resources that are available to it on a permanent, sustainable basis?

SECTION SEVEN
AN EXPLORATORY INVESTIGATION
OF EFFECTIVE RESOURCE ENHANCEMENT POTENTIALS

VII. AN EXPLORATORY INVESTIGATION OF EFFECTIVE RESOURCE ENHANCEMENT POTENTIALS

A. RATIONALE

The entire analysis to this point, serving to exemplify the need for seeking cost recovery mechanisms, merits distilling, integrating, and summarizing.

Since it peaked in 1976, the Ministry of Health's real per capita expenditure level has dropped by 28 percent (MCPI-based adjustment). With the exception of a single, one-year hiatus (which occurred in 1980), the erosion of the MOH's command over resources has been both monotonic and fairly constant. The impact of this trend has clearly left its mark on the public health care delivery system of El Salvador. The 20-year secular trend of the generally improving health status of the Salvadoran people was broken in 1980; most prominently by war, but also because of a less effectively functioning public health care system—the result, in turn, of an increasingly financially constrained Ministry of Health.

Government reallocations of appropriated monies to fund the costly war, coupled with general austerity measures forced on it by a faltering economy were then (in 1979) and remain today primary causes of the falling levels of real monies available to the MOH. Ultimately, these same factors—the war and the economy—can, at least in part, be held accountable for the growing scarcity of supplies in general (and most notably in medicines and drugs) in MOH facilities that has probably reduced both the effectiveness and the utilization of those facilities from what their levels would otherwise be, in a cumulative and spiraling fashion.

But the war and the economy were not and are not the only culprits. These trends, as we have seen, did not begin in 1979. They were evident even a decade ago, well before the war and the economic crisis developed. The war and the faltering economy only served to expedite and exacerbate trends and tendencies that already existed. The more fundamental source of the problems—ones that predate both the war and the devastated economy—has been of an institutional nature. Specifically, the problems derive from the historical mode of organization and the resource allocation and decision-making processes within the Ministry of Health.

The Ministry has two largely unrelated health care delivery constellations: one is composed of the so-called Centralized Agencies—the health centers, units, and posts; the other consists of the so-called autonomous agencies, overwhelmingly dominated by—the 14 hospitals. Composed, as it were, of two separate systems with physically, administratively, and procedurally independent budgetary processes, the Ministry of Health was not in a position to (i.e., was not institutionally configured in a manner that was conducive to) be able to effectively take control over its own destiny, let alone to rationalize the allocation of its falling absolute level of resources. Saddled with two different systems with very different needs, and suffering continual and significant reductions in its level of real resource availability, the Ministry simultaneously was being confronted with the ever-increasing recurrent costs generated by the coming online of a (still) rapidly expanding, donor-funded health infrastructure.

Given this rapidly and (at least in the first years) unpredictably changing situation, the Ministry's long-established practice of historical-based budgeting was a severe limitation. More facilities meant that more personnel were needed. And, as both the war and the economic crisis persisted, the implications of these fundamental institutional shortcomings manifested themselves in the structural lock of budget extrapolations: in the growing percentage of recurrent costs being spent on personnel at the expense of the growing shortage of supplies, materials, and drugs in the Regional Health Services facilities.

What is to be done? The development of a new, more flexible and decentralized administrative structure, combined with the adoption of epidemiologically-based and budget-tied health planning, both to be facilitated, expedited, and fortified by the adoption of a computer-based management information system, holds great promise. Any single one of these measures alone would, if successfully implemented, constitute a major institutional reform. Together they hold the potential for revolutionary improvements in the performance of the public health sector. It is imperative to note that each of these elements is, for the most part, an initiative that the Ministry of Health itself has developed.

Effective implementation of these various measures can do much to make better, more efficient use of available resources. Still, the problem of the level of available resources remains. Given the present level of funding that exists, and the less-than-savory economic forecasts for the country, short of a radical de facto abdication of its role as the provider of care for 85 percent of the people of El Salvador, the Ministry of Health must investigate, identify, and adopt mechanisms for extending its effective control over resources. The key word here is "effective." Since (as has been repeatedly demonstrated throughout this paper) there seems to be little reason to expect predictable and/or increasing absolute levels of resources to be forthcoming from the Central Government, the MOH must look elsewhere.

Given the level of international attention and aid being focused on El Salvador at this time (due to the civil war), donor agencies do hold some promise in this regard—but only in the short term. Given the implicit costs that have been associated with the reliance on donor agencies to date (in terms of their having often and significantly compromised the decision-making authority and institutional cohesiveness of the MOH), and the critical and historical crossroads at which the Ministry presently stands, cultivating further dependence on donor agencies needs to be avoided—at least in the "business as usual" mode. To the extent that the past holds lessons for the future, increasing reliance on donor agencies at this time would heighten the potential that the decision-making authority and/or the institutional cohesiveness of the Ministry (such as it presently is) would be (further) compromised. Because these are two of the key institutional problems that the Ministry of Health is presently coming to grips with on its own, the most useful role for donor agencies now and in the near future is to provide

the wherewithal to facilitate and expedite the implementation of the various MOH initiatives that have been noted. *

But even apart from the need to insulate the institutional redefinition presently underway within the MOH, it is clear that long-term solutions cannot be built on the expectation that donor agency monies will always be available and forthcoming. Such monies are driven by political considerations, and as such are volatile. Therefore, in the long run, public health care in El Salvador must be predicated on a better managed, more fiscally sound, and more financially independent national system.

The current financial crisis of the MOH attests to the veracity of this contention. But the development of such a system will not be easy, painless, or a short time in coming. And, the structure of such a system may be very different than the present one. The Ministry of Health, and on a higher level, the Government of El Salvador, may find that it cannot do all of the things it once thought or hoped it could. Moreover, stuck with the near universal agreement that the future holds naught but more of the recent past, the time to begin a careful winnowing evaluation of possible avenues to both decreasing the Ministry's expenditures and to increasing the level of the Ministry's available, effective resources is at hand.

What are the alternative possibilities that might be considered, and how are they to be compared? What are the relevant criteria to use in their evaluation? Let us start first with the criteria. We offer essentially three; one of which is primarily economic in character—efficiency; one of which is essentially political in nature—acceptability; and one of which spans these two categories—the equity consideration.

B. A FRAMEWORK FOR ASSESSING ALTERNATIVE EFFECTIVE RESOURCE ENHANCEMENT SCHEMES **

(1) Efficiency Considerations

There are two fundamentally different dimensions to efficiency: technological, or operational, efficiency, and allocative efficiency. Technological efficiency is the use of the least cost combination of inputs to produce a given level of a particular

* Donor agencies, with their own needs and priorities, have been something of a double-edged sword for the public health sector of El Salvador. They have been of great assistance in addressing a number of major issues and problems in the public health sector, but not often without concomitantly creating others. Most evident perhaps is the continued development of the referral system infrastructure, with its inevitable subsequently increased recurrent costs of personnel and materials, at the same time that the operations budget of the MOH was being increasingly consumed by these fixed, recurrent costs. For additional discussion of the role of donor agencies see team member Irene Boostrom's report.

** This evaluative framework, in a slightly different form, was suggested by James R. Jeffers.

type of output (good or service). Technological efficiency requires that the prices of the individual inputs used in the production of the good or service in question be known, and that the best (most efficient) production technologies available be used. The least cost combination is dependent on the simultaneous consideration of the relative prices of inputs and the alternative available technologies. The cost that on average is incurred in producing the good or service (the so-called average cost) is the single best measure of technological efficiency.

Whereas technological efficiency deals with the best combination of inputs to produce a given level of output of a particular good or service, allocative efficiency deals with efficiency on a different level. It considers what is the most desirable mix of all goods and services.

Administrative feasibility may be viewed as an additional component of the more general efficiency consideration that deals more specifically with the institutional capacity of the organizational units that are to be involved in carrying out the proposed reforms. These types of considerations deal with assessing whether the quantitative and qualitative personnel resources are adequate in themselves, and whether they are complemented by adequate physical/material resources to enable them to bring the proposed changes to fruition. Training, experience, evidence of past performance, and the more difficult to measure notions of attitude and professional commitment, are key indicators of the qualitative dimension of those who are to be involved in and responsible for the proposed changes that are critical to evaluate.

(2) Equity

Equity is an elusive, unscientific concept. As such, subjective assessments are inevitable and issues of degree become of vital importance. What constitutes an acceptable level of equity is in large part a function of one's socialization process. Hence, the notion of equity varies with culture, and, even more so, with the individual.

In health care delivery what generally is recognized to be the goal is not perfect equity in the use of services, but rather relative equity in access to care. This takes into account the differential "need" individuals have for services—which is an obvious, important consideration.

Although there is at present almost no data on the distribution of income or wealth of public health care users in El Salvador, equity in access to care has been both a concern and a recognized problem. The effort to enhance equity has been, for example, one of the chief factors motivating the MOH in obtaining funding for the expansion of its infrastructure. Ironically, it is in part the effort to achieve equity in access that now threatens the existence of the entire system as an effectively operating entity, and could make all Salvadorans more equal (vis-a-vis the public health care system), but without care.

It has become self-evident in the course of this study that the future financing of the public health services of El Salvador must be changed, and this is one of the key determinants as to whether or not Salvadoran society will view proposed and implemented changes as acceptable and feasible in the long term, but there are others that need to be examined as well. They are collectively labeled "acceptability."

(3) Acceptability

Consumer acceptability—The ultimate aim of health policy and of the Ministry of Health is the improvement of the health of the people of El Salvador. For any proposed change to be meaningful, therefore, it must be perceived by the consumer—the average Salvadoran dependent on the MOH for health care—as being acceptable. Again, questions of degree are important. If consumers do not approve of a change in the way in which services are delivered because they feel the quality is being compromised, or if the financing mechanism makes the MOH too expensive for them, it creates the risk that they will not fulfill their role as consumers, undermining the legitimacy of the MOH. Consumer attitudes and perceptions, however, do change. With the difficult choices the MOH has to make, it would do well for it to bear in mind the role of consumer education. Consumer education can help turn what initially looks like an unacceptable change in practice into something the MOH-public comes to better understand and appreciate, and in due time, accept. In implementing change, it will be important to both predict and monitor consumer acceptability; it constitutes an important feedback mechanism and information source.

Provider Acceptability—The providers of particular relevance here are obviously those working for the MOH. In part, we have already addressed some of the changes for which it would be important to view the relevant provider community as the entire profession—private and public providers, alike. For instance, in addressing the issue of whether or not maternal-child health care and family planning activities might be further, more uniformly, and formally delegated to nurses and auxiliaries in order to enhance efficiency, it would be necessary to assess the degree of support or opposition that might be forthcoming from the professional medical associations.

Political Acceptability—Health is a central concern of people everywhere. When there is talk of changing the role and/or functions of the primary government agency involved in the development of health affecting policies and the direct delivery of care to the overwhelming majority of the population, as in El Salvador, it is a political issue. Here again, we are interested in the two sets of actors discussed briefly in the overview of the budgetary process. Whether or not a particular measure is viewed as politically acceptable will be based on the perspectives of the principal actors involved in national politics, in general, and in particular those who are more specifically active in national health care politics. They are likely to be motivated largely by their own final solution to the calculus of political gains and losses, which are, in turn, functions of what the public's attitude and response are expected to be.

A brief stay in El Salvador did not enable development of enough data to assess the potential role of many of these criteria. What is offered here is a partial picture and a planning tool, a framework to be increasingly operationalized and refined as more data become available so that a well-balanced evaluation of the primary considerations is developed in the interest of more carefully and objectively thinking through these multifaceted issues and their multifarious implications for Salvadoran society.

C. IMPROVING THE EFFICIENCY OF MINISTRY OF HEALTH SERVICES

In the course of the analysis of the MOH's operations over the past decade, a number of efficiency-related issues have been raised. These are itemized here for the sake of convenience, but will not be discussed in detail.

1. Are relatively better paid physicians providing services that could be equally well or adequately performed by nurses and/or auxiliaries? This is an efficiency issue that will require further detailed analysis of particular types of services. The obvious candidates for assessment are the types of activities it was learned nurses and auxiliaries are already doing: MCH and family planning services. The effort to develop formal standards (which could be incorporated into the norms presently being developed by the Operative Norms Division of the MOH) would almost certainly be subject to political opposition from prominent physicians and professional physician groups. In the event that the possibility of establishing such formal standards looks promising, the manpower implications of probable changes need to be investigated promptly.
2. Are the higher levels of care in the referral network providing the same types of services that centers, units, and posts could be, or are centers doing things that units and posts could be doing, and units things that posts could do? In other words, is the bypass phenomenon widespread? If so, what is the cause of it? Is the limited availability of physicians at posts the problem at that level? Is the relatively more limited availability of drugs and materials at the lower levels of care an explanatory factor? This too is an efficiency issue.
3. When drugs are available, do too many get prescribed on average to the typical patient?
4. Is the MOH devoting too much of its budget to hospitals?
5. And, the closely related issue: Is the MOH producing too much curative care relative to preventive care?
6. How much of the MOH should be allocated to drugs vis-a-vis personnel?
7. Does the MOH system have too many facilities?

These are important efficiency-related questions that the preceding analysis has raised, but has not been able to answer definitively. They have major, self-evident efficiency implications, and need to be investigated in detail.

D. THE SPECIAL TAX APPROACH

One of the most obvious approaches to increasing the MOH's purse would be either to establish a new tax or to earmark revenues from an existing tax for the use of the Ministry of Health. Many countries around the world have special "for the MOH" taxes. One of the most common practices is to tag alcohol and cigarette taxes.

(1) Alcohol And Cigarette Taxes

Frequently the official justification for earmarking revenues from alcohol and cigarette taxes is the recognition that consumption of these products is detrimental to health and is responsible for the MOH expenditures being greater than they would be otherwise. Thus a type of "benefits received" tax philosophy would suggest that smokers and drinkers should contribute more for the provision of MOH services. In addition, the taxes serve to increase the prices of these "goods," and thereby reduce the level of their consumption, which in turn reduces the magnitude of their adverse impact in the aggregate.

Alcohol and cigarette tax revenues from 1975 to 1985 are presented in Exhibit XLI. The level of these revenues is very high in both absolute and relative terms. Together they have accounted for roughly 10 percent of total tax revenues. In 1985, they amounted to about 80 percent of the MOH budget. The tax on alcohol was increased in both 1983 and 1984, and is 1.50 colones per liter. The cigarette tax is an ad valorem tax (its level varies according to the sales price of the cigarettes).

Given that alcoholism is described as a major health problem in El Salvador, and that cigarette taxes have not been raised in more than a decade, it would seem we have found an attractive source of new revenues for the MOH. However, there are several other worthy considerations. First, given the fact that the Ministry of Hacienda is currently preparing a major revision of taxes, it would seem premature to urge a change (their total diversion to the MOH, or the diversion of the incremental proceeds acquired through an increase in the rates) at this time.

Second, in view of the magnitude of the economic crisis currently wracking El Salvador, and the austerity package that this crisis has forced the Government to enact, this maneuver would probably be inadvisable, at least at present. The "paquete" triggered widespread and large-scale protests ranging from street demonstrations (cf., "Comentarios, El Paquete Economico," pp. 90-92, and "Unidad de los Trabajadores Ante El Paquete," pp. 93-95, Estudios Centroamericanos, Universidad Centroamericana, Jose Simeon Canas, enero-febrero, 1986), to the formal denunciation of President Duarte by business associations (e.g., ANEP; see El Diario de Hoy, p. 1, 12 de junio, 1986).

To seek to tie or earmark particular taxes to particular government agencies, with or without increases in their general levels, would be ill-advised in El Salvador in the near future. Doing so reduces the degree of freedom of economic policymakers who for the foreseeable future have an extremely complex and politically no-win situation with which to deal. Moreover, in light of these conditions, it is highly improbable that any such effort would succeed.

(2) National Lottery

Probably the second most popular approach to increasing MOH revenues (outside of increasing user fees) is to start a national lottery, and to use all of the net proceeds to support the activities of the MOH. While such an arrangement has the attraction of constituting a "voluntary" contribution, its impact on income distribution is regressive (i.e., among those electing to participate, purchasing a ticket requires a larger proportion of the income of poor individuals as opposed to wealthier individuals). A second drawback is that the lottery scheme has not been

EXHIBIT XLII

ALCOHOL AND CIGARETTE TAXES, 1975-1985

YEAR	ALCOHOL TAX REVENUES		CIGARETTE TAX REVENUES	
	ABSOLUTE AMOUNT	AS A PERCENT OF TOTAL TAXES	ABSOLUTE AMOUNT	AS A PERCENT OF TOTAL TAXES
1975	50.249.249	9.28%	20.190.696	3.73%
1976	60.901.983	7.93%	24.583.695	3.20%
1977	73.275.213	6.48%	27.818.956	2.46%
1978	73.746.966	7.18%	30.517.736	2.97%
1979	76.626.163	6.30%	38.142.065	3.14%
1980	77.537.876	7.84%	43.988.461	4.45%
1981	82.691.786	8.35%	45.399.998	4.58%
1982	78.894.707	8.29%	48.694.575	5.11%
1983	81.608.180	7.56%	51.744.044	4.79%
1984	87.175.756	6.45%	55.066.201	4.08%
1985	97.917.928	5.90%	62.591.397	3.77%

Source: Informe Complementario Constitucional, Ministerio de Hacienda, Varios años.

found to be a particularly efficient way to raise monies; lotteries have relatively high administrative costs.

A national lottery already exists in El Salvador. In 1985 it generated income of 11,952,400 colones. Since this sum constitutes only 6.8 percent of the 1985 level of MOH expenditures, and proceeds have been relatively constant since 1977 (see Exhibit XLII), the potential of this method of raising money has been largely exhausted in El Salvador. At best, it could provide a supplementary source of funds; it would be a relatively minor, but not unimportant, source. In the context of El Salvador's economic crisis, however, it would be difficult to gain exclusive access to these funds. Furthermore, any effort by the MOH to try to establish a second lottery would probably be unsuccessful, as it would most likely be construed as simply providing competition for the limited amount of lottery colones. (In effect, this would indeed to be the case.) The MOH it seems will have to look to mechanisms other than special taxes to generate additional revenues.

E. PRIVATIZATION

Privatization has been a popular word of late—a word that means so many different things to so many different people that it now has a very diluted meaning. To discuss the privatization options systematically, therefore, requires a brief digression.

The notion of privatization has been simplistically condemned by some as a way for governments (motivated by financial considerations) to eviscerate their ministries of health, to abrogate their public health responsibilities, and to wash their hands of their health service provision, leaving health care a private sector activity. At the other end of the spectrum are those who herald privatization as a panacea, a way to rationalize the division of labor between the public and the private sector and thereby to develop a true "system" of health care.

Apart from these extreme views, which impart concealed motives and ultimate goals to actors in the health arena, it is useful to recognize that aside from the possibilities that (1) governments—El Salvador's included—might allocate more resources to health care than they have historically done; and (2) the savings that can be generated by increasing the efficiency of operations, the plethora of alternative approaches designed to ease the financial duress of Ministries of Health in developing countries all constitute examples of privatization.

Privatization may be viewed from both sides of the market: from the demand side (taking into account the consumers' perspective and role), and the supply side (taking into account the producers' perspective and role). The privatization option(s) has generally been oblivious to the demand side, and viewed only in terms of the supply side. The time has come to realize that the demand side of the market is worthy of consideration as well. Even the incremental change introduced by simply establishing user fees is in fact a form of privatization. Recognizing that for the public health sector of most countries the prospect of being allocated significantly increased funding levels in the near future is highly unlikely, the alternative solutions available boil down to two general categories: increasing efficiency and privatization.

EXHIBIT XLIII
NATIONAL LOTTERY REVENUES

<u>YEAR</u>	<u>REVENUES</u>
1975	6.770.492
1976	8.401.500
1977	10.973.492
1978	12.137.944
1979	11.071.994
1980	11.000.000
1981	10.495.461
1982	11.332.770
1983	12.429.162
1984	10.592.193
1985	11.952.400

Source: Informe Complementario Constitucional,
Ministerio de Hacienda, Varios años.

To assist decision-makers in the evaluation of proposed alternatives an evaluation matrix will be developed. The matrix will contain seven summary evaluative statements for each proposed, potentially effective resource enhancement scheme: one for each of the seven criteria just discussed. Since it summarizes the discussion of this section, the matrix is presented on the last page of this section, in Exhibit LIII.

Clearly the possibilities other than improved efficiency for increasing cost recovery in the public health sector span a very wide range of choices. Which ones are likely to be most appealing is determined by the relative feasibility for achieving their stated goals, the criteria used to evaluate them, and the value system of the judge (which is reflected in the relative weights he or she assigns to the various criteria).

Hence it is important to bear in mind the criteria that have been established for evaluating the alternatives proposed here. The final determination of which of the alternatives is most appealing will depend on the relative weights assigned to these criteria. Moreover, it may be that these weights change from one context to another. The purpose of developing the evaluation matrix, therefore, is simply to provide a summary of the general discussion: to enable disentangling several key and generally overlapping considerations. The matrix not should not be perceived as, is not intended to be, and should not be construed as providing "scientific" solutions to these difficult choices. The final solutions—the final selections—will be the result not of the simple sum of several artificially compartmentalized dissections of the components of each of these possibilities, but of their simultaneous consideration. The matrix is a decision-making tool for issues clarification and values clarification; nothing more, nothing less.

Perhaps the primary reason that privatization has been looked to by so many as holding the "key to salvation" for public health is that it has been seen as the vehicle to introduce the market mechanism into the public health sector. It is thought that this approach will effectively (and simultaneously) introduce what is generally presumed to be a "better" incentive structure into public health care delivery.

Financing mechanisms are key to understanding differences in incentive structures, and concurrently, differences in patterns of service provision in health care delivery structures. Until recently, most private health care was provided on a fee-for-service basis. This particular method of financing has resulted in a particular set of incentives that, when considered as a whole around the world, has generated an ambiguous record. Although there is general agreement that private fee-for-service—especially where (some would say only because) there has been substantial third-party insurance coverage—has amassed an impressive record in terms of being able to effectively control or eliminate a host of diseases and (in general) to provide high quality health care, it has not proven particularly efficient in doing so. In particular, there has been an inefficient allocation of resources between curative and preventive care. The record of private care providers providing adequate preventive services has not been a good one. This has started to change, but only as financing mechanisms (and concomitant incentive structures) have started to change; only as the more traditional fee-for-service approach has been displaced by the fee-for-coverage approach. The ensuing discussion turns first to assess the implications of full-scale or total

privatization of the public health sector—not a very realistic possibility, but nevertheless a useful benchmark against which to measure other, more likely, partial schemes.

(1) Total Privatization Of The Public Health Sector: An Unlikely Policy Alternative, But A Relevant Benchmark

The private sector does not have the social mandate to be concerned about the health of the general population. The private sector is characteristically made up of a large number of individual physicians who generally keep very busy in their private practices—too busy to regularly step back and take in the "big picture," the country-wide system view. As a result, there are likely to be holes in that system; for example, segments of the population—in particular, the poor and the chronically ill—who are unable to obtain adequate care; or for another example, inadequate provision of preventive services. Historically these are service items that have been largely neglected by the private sector. They generally have not been well covered, unless the public sector has provided them.

Recognizing that there is general agreement that most preventive services are cost-effective, it may be inferred that total reliance on the private sector—assuming that it does in the future what it has generally done in the past—will result in both technical and allocative inefficiencies. Rather than producing a healthy baby through prenatal visits and counseling, the private-sector system more frequently produces one requiring an incubator and intravenous feeding (the technical efficiency consideration); rather than allocating more resources to preventive services, it allocates more to curative care (the allocative efficiency consideration).

Contrary to much of the conventional "wisdom," concerns about efficiency should not prompt the wholesale embracing of the privatization option, but instead should prompt careful scrutiny of exactly what should be privatized. As Russell and Zschock (1986, p. 44) have noted, "private for-profit firms are likely to have a slightly different view than donor agencies or ministries of health as to what makes a privatization option attractive. Businesses want their risks indemnified, their development costs subsidized, and they want a share of the savings. A careful project appraisal from the government's point of view is needed to ascertain whether this arrangement will yield significant savings once all these costs are calculated."

Specifically, in the case of El Salvador, the total privatization of health care would likely lead to increased concentration of services in the capital—where there is the greatest ability to purchase care, although the willingness and "need" may be the same or even less than throughout the rest of the country. Thus, more than a decade of organizational and infrastructural effort to turn back the private-sector-led pattern (and the ongoing process) of growing concentration and centralization, and to try to increase access to and utilization of health care services throughout the country, would be jeopardized. Concerns of equity and efficiency, therefore, militate against wholesale privatization of the public health sector.

(2) Total Privatization Of Curative Care

What about privatizing only some of the health care services? The obvious candidate would be curative care services. The equity shortcomings of this intermediate approach do not differ greatly from those of the preceding scenario. The poor would now be subject to relatively greater deprivation with respect to "only" curative care services.

What about the efficiency considerations? The allocative efficiency of the total health system would probably suffer. By losing its curative care functions, the public system providers would lose most of their access to the curative care network. Both of these losses would reduce the public system's access to patients. Eliminating this contact—an important, free, and probably very effective, direct communication channel—would undercut the support for and participation in, and therefore likely reduce the impact of, many prevention and health promotion activities. The public health system's only clientele would be individuals actively seeking out the services of preventive programs. Because the intensity of the need for such services is far less than it is for curative care services in general, it is likely that preventive care would suffer vis-a-vis curative care (and, thus, so would allocative efficiency).

To the extent that the Government wanted to increase revenue generation from user fees, any effort providing only preventive services would probably be far less likely to succeed. Although there is no empirical evidence, it is probable that the price elasticity of demand for preventive care is greater than that for curative care. Hence any effort to increase the price of preventive health care services would result in a greater relative reduction in patient flow than in increased revenues. Given that most preventive services are thought to be cost-effective, instituting and/or increasing user fees for preventive services would be a myopic policy from a social perspective, though not necessarily from the Government's perspective (now that preventive and curative care service provision responsibilities have been split).

Although increasing the price of preventive services might generate some revenues for the Government in the short run, in the long run the social costs of the consequently greater outlays for curative care would more than offset these revenues. But, again, if the general responsibilities for curative care now rest with the private sector and the financial responsibility for curative care now rests with the patient, from a purely financial perspective—though not a social perspective—it may make sense to the Government to charge for the preventive services. The result, however, is a change in the relative volume of curative versus preventive care, which is allocatively inefficient.

(3) User Fees

Establishing some sort of user fee schedule is probably the most immediately appealing and obvious choice for stretching the MOH's health colonies. It would simultaneously enable increasing revenues, reducing unnecessary utilization and, if the monies raised were poured directly back into service improvements, it could enhance the quality of the services supplied. Moreover, the improved quality of services might encourage people to substitute (back to?) MOH providers/facilities for pharmacists and private physicians (to the extent that they use these alternative sources of care because of the perception of a substantial quality difference).

We have already discussed the importance of drugs to Salvadorans' perception of quality health care in general, and the role of the pharmacists as a substitute for posts (and to a lesser extent the units), especially by males. The reduction in unnecessary utilization might also mean reductions in the time expense associated with the use of care—waiting time and appointment time delay—which discourage utilization. The greater the fall in unnecessary utilization (encouraged by the user fee charge) the greater the reduction in the time expense of care. This would enable providers to feel less pressed to "get them in—get them out," which in turn could result in another round of improved quality of care.

But how can one be certain that the reductions in health care use prompted by increased user fees result in reductions in unnecessary utilization? This ultimately begs the question: what is the appropriate level at which to set user fees? The lack of knowledge about the true economic costs of providing MOH care or of the prices paid in obtaining the care render any effort to set "appropriate fees" pure guesswork. We can hope to recognize what an "appropriate fee" is, but we will only be able to identify the "appropriate fee" by chance. An "appropriate fee" is a fee set at a level that does not drive consumers who really need care out of the MOH market and maybe out of the medical marketplace entirely; or into the private physicians' sector; or into substituting pharmacy-obtained drugs and self-medication alone for MOH services; or that does not so reduce users' income as to adversely affect health by forcing a choice between health care and some other basic good (e.g., food). These levels can be fairly easily identified after the fact—after the damage has been done. The trick is to be able to identify them a priori.

A Framework For Setting "Appropriate Prices"

How high is too high? It depends on several factors that must be considered simultaneously. It must be borne in mind that prices are a rationing mechanism that provide information and incentives; therefore interfering with the market mechanism, i.e., with price, alters the information and incentives that otherwise would have existed. Prices are the result of the interaction of suppliers (providers) and demanders (consumers/patients)—two sets of people with very different goals and motivations. It follows that if one is interested in establishing prices by fiat—as opposed to allowing the market to determine them—that one should be aware of both the supply and the demand implications of doing so. From a demand perspective, the basic rule of thumb guiding the establishment of user fee levels should be: the greater the level of positive externalities, the lower the price.*

* The level of positive externalities associated with any particular good or service is a function of the place and time—i.e., the country-specific context is important. For a brief discussion of positive externalities see Appendix D. Of course, good economics is not the only consideration when deciding when, where, if, and how much health care to provide. Clearly it is good politics too. Health care is a valued and highly visible service, which can also play an important government-legitimizing role as well.

The supply side of the market, in contrast, is concerned with the cost of providing goods and services. The more expensive it is to produce a good or service, the greater the price must be before suppliers in a free market are willing and able to provide it (other things being equal). Hence, from the Government's perspective—the Government is the supplier here—the higher the cost of providing a particular medical care good or service, the more pressing the need for cost-sharing (or from the consumer's point of view, the more likely a user fee will be charged).

There is at least one argument, however, against the simple, uniform application of this basic rule of thumb. The patient who is forced to bear a portion of the costs—perhaps an increasing relative amount as well as an increasing absolute amount of the costs of providing the care he is receiving—risks going broke. In almost all countries, this possibility is recognized by governments as a very real possibility, and individuals are protected from financial devastation by catastrophic illness through some sort of risk-sharing mechanism.

Hence we have a qualification for our general rule of thumb concerning the supply-side consideration of the "correct" level of user fees: as the cost of providing a particular medical care good or service increases, other things being equal, the individual should be expected to contribute more for his treatment, i.e., pay a higher user fee; but only to the extent that he does not face "financial ruin" as a result.*

Given this theoretical framework, how do we proceed? How can we go about assessing people's willingness and ability to purchase medical care? Since people in developing countries in particular have not had the "opportunity" to purchase public health services, we have to develop a proxy measure of their willingness and ability to purchase public health services by looking at the private sector. In the last few years in many developing countries around the world empirical evidence has been accumulating that reveals that private spending on health is considerably greater than previously thought.

What is the evidence in El Salvador? Thin. No systematic studies of the private sector have been done. Still there are a few interesting pieces of insightful information. There is a sizable national drug/pharmaceutical industry in El Salvador (see Appendix E for a brief, piecemeal description). In 1984, drug and pharmaceutical imports into El Salvador totaled 152.5 million colones—6.2 percent of the total value of imports (see Exhibit XLIV).

The value of imported drugs and pharmaceuticals alone—i.e., not even including the domestic sales of national producers—comes to an average of more than three colones per Salvadoran per year. The only other information obtained about the size of the national drug market was gathered at the MOH. In interviews with the Director of the MOH Purchasing Department and the chief drug procurement

* Generally, however, payment for a treatment—that is, the provision of a single medical care good or service—does not put the individual at risk of financial disaster. What does is a particular illness, disease, or accident that requires a series or battery of medical goods or services if treatment is to be deemed socially "adequate" or "acceptable."

EXHIBIT XLIV

THE VALUE OF MEDICINAL AND PHARMACEUTICAL IMPORTS
(THOUSANDS OF COLONES)

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	Jan. June <u>1985</u> *
Total Value	115.794	141.231	122.006	126.561	152.509	77.869
Percent of Total Import Value	4.8%	5.7%	5.7%	5.7%	6.2%	6.7%
Growth Rate		22.0%	-13.6%	3.7%	20.5%	2.1%

* Extrapolated for an annualized measure.

Source: Revista Trimestral, Julio/Septiembre-1984,
Octubre/Diciembre-1985, Banco Central de Reserva de El Salvador.

clerk, it was learned that MOH purchases from Salvadoran drug firms totaled 7.3 million colones in 1984 (see Exhibit XLV).*

That gives us (with a still incomplete picture) an average per capita annual expenditure of 4.5 colones. Lacking data on what is likely to be by far the largest volume of drug expenditures in El Salvador, namely private purchases of domestically produced products, it is clear that the anecdotal evidence suggesting that Salvadorans like drugs was accurate.

The only other evidence about the private health sector is discussed in Section V on physician productivity (which also deals with the Government-fixed prices in the private sector).

Local Needs and Local Response: Patronatos and Voluntary Contributions—The careful reader will note that from the outset of this discussion of user fees there is no discussion about establishing user fees in the public health care sector, only about increasing them. An informal schedule of "voluntary" contributions for MOH-provided services already exists. It was not ascertained when the system was first instituted, but it exists in both the Centralized Agencies and the hospitals. On average, the centers, and to a lesser extent the units, and to an even lesser extent the posts, request that their users contribute two colones per visit. Generally, this contribution is perceived as also being for whatever medicines might be provided by the facility (to the extent that they are available).

These monies are put in a fund that is managed (at least formally) by the community health board, or patronato. The patronato was established circa 1947 by law. Its makeup, duties, responsibilities, and functions, both de jure and de facto, are documented and detailed in the August 1985 Kraus International Report, "Premises for the Formulation of Cofinancing Options for Public Health Services." The patronato-controlled funds are revolving accounts used by the centers, units, and posts to augment their annual Central Government-provided budgets. An estimated 80 percent of their revenues come from patient user fee payments. The remainder is raised by the health board through the solicitation of philanthropic contributions and, more quantitatively important, the hosting of various community activities and fund-raising events. Although legally the patronato is charged with the responsibility of overseeing the fund and its disbursement, in most cases the head of the facility associated with a particular

* Particularly in 1984 and 1985 the sums contained in the MOH-supplied data—both their sizes and their distributions between domestic and foreign purchases—suggest a very different picture from that depicted by AID/ES. While it does appear that there was a relative shortage of drugs in 1983, most of the shortage appears to be related not to imported pharmaceuticals (as AID/ES maintained), but rather to purchases of domestically produced ones. This is difficult to reconcile with the AID/ES stated justification for the VISISA emergency drug drop as being principally motivated by a foreign exchange shortage of crisis proportions. Clearly the MOH has had a drug shortage problem (and a growing one) for several years, but the data from MOH's Purchasing Department does not suggest that it was not already a relatively long time in coming, or of a foreign-exchange-related, emergency nature.

EXHIBIT XLV

MINISTRY OF HEALTH PURCHASES OF PHARMACEUTICAL PRODUCTS

A Ñ O S	1982	1983	1984	1985
Nacionales	₡ 8,158,821.00	₡ 4,430,935.30	₡ 7,320,149.80	₡ 7,383,693.85
<u>Extranjeras</u> Fecha de compra			28 noviembre/84	4-Julio - 1985.
Colombia	-	-	₡ 12,775,167.50	₡ 4,764,832.50
Fecha de compra			26-octubre-1984	15-septbre. 1985.
VISISA			₡ 9,466,685.00	₡ 5,623,400.00
GOES	₡ 3,954,601.30	₡ 3,488,563.32	₡ 2,791,417.30	₡ 3,965,090.00
TOTALES	₡ 12,113,422.30	₡ 7,919,498.62	₡ 22,313,419.60	₡ 21,937,016.35

San Salvador, abril 14 de 1986.



board generally decides (with considerable latitude) how the monies will be spent. It was reported that there is some oversight on the part of the Regional Health Services. This consisted of what generally was described as a largely perfunctory signing off for (only) sizable expenditures (which were reported in one region to be required for expenditures larger than 600 colones, and in another for expenditures exceeding 20 percent of the total fund).

These funds are spent on personnel—general labor—as well as on drugs, supplies, and materials. Between the only two years for which patronato fund—contract labor data were reported in either of the MOH annual publications (Memoria or Salud Public en Cifras)—1982 and 1983—there was a marked reduction (56 percent) in the number of such positions. Since the level of expenditures of these funds did not change much in these two years, it may be deduced that they were spending a larger absolute and relative amount of their monies on drugs and materials and supplies. Directors of centers and units (in interviews with team members) reported that they were spending most of these funds on drugs and pharmaceuticals. To the extent that the share was quantified, 80 percent was the number usually cited. Having seen what was happening to the MOH's allocation for Regional Health Services for these items in the past six years in particular, this is not surprising.

Exhibit XLVI presents data collected on the size of the patronato-directed/controlled funds income and expenditures for the regional health facilities for 1976-1979 and for 1982-1985.*

As already noted, it is not certain when the practice of requesting contributions from patients began. Nor was it ascertained how the level of "suggested contribution" may have changed over time (if it did); nor how the level of need for these funds may have changed the methods by which contributions were solicited (if, in fact, they did); but from the record (as depicted in Exhibit XLVI) it is obvious that the MOH has responded to the increasing shortage of drugs, materials, and supplies in their local facilities by increasing their participation in the financing of their health services. Between 1978 and 1985, the revenues and outlays of the patronato-directed funds for all health posts, units, and centers throughout the country more than doubled. Also reflected in this data is another recurring theme: the local MOH providers have been innovative and resourceful in their approaches to matching up low levels of resources and high levels of need.

Exhibit XLVII presents the patronato-directed fund receipts per physician visit in 1983-1985, by region. Caution is urged in interpreting these figures. First, the patronatos obtain income from sources other than the provision of physician services: as already noted, they obtain them through various fund-raising activities they sponsor, and from contributions/donations from the community (i.e., independent of service provision). In addition, according to the Kraus study, the centers, units, and posts generate revenues by charging for other types of

* Recently, some of the Regional Health Services offices, all five of which keep records of the total patronato-controlled funds in their territories, have begun to report the levels of the expenditure of these funds by type of item purchased (see team member Irene Boostrom's report).

EXHIBIT XLVI
(Page 1 Of 2)

PATRONATO FUNDS OF THE CENTRALIZED AGENCIES
(HEALTH CENTERS, UNITS AND POSTS)
(IN COLONES)

<u>YEAR</u>	<u>TOTAL</u>	<u>OCCIDENTAL</u>	<u>CENTRAL*</u>	<u>METROPOLITANA</u>	<u>PARACENTRAL**</u>	<u>ORIENTAL</u>
<u>1976:</u>						
Receipts	1.535.831	275.589	230.613	343.350	219.254	467.025
Outlays	1.524.857	270.355	233.507	344.018	204.052	467.925
<u>1977:</u>						
Receipts	1.453.840	143.079	286.156	308.300	258.934	457.380
Outlays	1.486.026	130.124	283.689	315.448	251.871	504.894
<u>1978:</u>						
Receipts	1.407.406	159.802	222.211	329.662	298.013	
Outlays	1.395.300	154.916	215.583	332.692	295.298	
<u>1979:</u>						
Receipts	1.667.906	354.843	310.901	300.912	140.289	560.961
Outlays	1.613.604	297.636	299.339	296.351	165.578	554.700
<u>1982:</u>						
Receipts	2.610.400	669.771	181.120	663.551	271.448	824.510
Outlays	2.577.953	638.146	169.357	647.228	259.052	864.170
<u>1983:</u>						
Receipts	3.351.688	824.631	178.480	802.757	298.703	1.247.306
Outlays	2.804.893	830.304	174.291	799.002	309.892	691.404
<u>1984:</u>						
Receipts	3.249.424	932.382	164.994	813.707	404.582	933.759
Outlays	3.133.000	944.613	176.274	758.331	382.815	870.966
<u>1985:</u>						
Receipts	3.244.865	933.750	154.493	911.895	351.643	893.084
Outlays	3.010.972	907.774	142.575	851.931	346.354	762.338

EXHIBIT XLVI
(Page 2 Of 2)

- * Salud Pública en Cifras 1982, p.24: Ingresos = 314,768;
Egresos = 314.157
- Salud Pública en Cifras 1983, p.24: Ingresos = 404.842;
Egresos = 395.059

These amounts appear to be more consistent with earlier data for the region, yet the telephone survey reported data for 1981-1985 for the region is remarkably consistent as well. It maybe that although they indicated otherwise the earlier data may have included the two hospital in the regions patronatos too.

Similarly the 1982 and 1983 data for Oriental are reported to be significantly less in Memorias: The 1982-1983 issue reports (p.108) Oriental receipts to be ₡547.981 and outlays as ₡570.140. The 1983-1984 Memorias (p.126) reports receipt of ₡786.155 for the region and outlays of ₡776.427. These data appear to be more consistent with those reported for the 1976-1979 period.

Yet, señora de Leiva was aware of the need to distinguish between the facility source of the funds and assured me that the numbers she obtained - those reported in the Exhibit - are only from centers, units and posts.

- * 1985 data for the Paracentral region were unavailable. To provide a more up date analysis a conservative technique was used to estimate the figures which are contained in the table. They are the simple average of the two preceeding years. Note these are also contained in the total column. A major discrepancy exists in what was reported in the telephone survey and data contained in the Salud Pública en Cifras.

Sources: Salud Pública en Cifras, 1976, 1977, 1978, "Cuadro 23: Movimiento Anual de los Ingresos y Egresos en Colones que custodian los Patronatos de los Establecimientos de Salud", Departamento de Estadísticas de Salud, MSPAS, 1977, 1978, 1979. The 1982-1985 data were obtained expressly for this study in a telephone survey of the region conducted by Sra. Dolores de Leiva, Jefe del Departamento Financiero Contable, MSPAS.

EXHIBIT XLVII
PATRONATO FUND RECEIPTS PER
PHYSICIAN-PROVIDED VISIT BY REGION
(IN CURRENT COLONES)

YEAR	COUNTRY-WIDE AVERAGE	OCCIDENTAL	CENTRAL	METROPOLITANA	PARACENTRAL	ORIENTAL
1983	2.61	3.15	1.00	1.60	1.94	6.63
1984	2.17	3.16	0.89	1.58	2.02	3.30
1985	2.50	3.65	0.94	1.95	2.11	3.65

Source: Computed from data in Exhibits XVIII and XLVI.

services—in addition to the physician-provided outpatient visit—for x-rays, laboratory examinations, nursing services, etc. (Kraus 1985, pp. 9-13) Whether or not this is universally true of all such facilities was not ascertained. Kraus, by not stating otherwise, certainly implies that it is, but that does not appear to be the case (see team member N. Macpherson Chapin's report).

Another reason for interpreting Exhibit XLVII conservatively is that (recall) the number of medical care visits provided by physicians vis-a-vis nurses and auxiliaries, has been falling. Thus the findings in Exhibit XLVII are not to be interpreted as the actual revenues collected per physician visit: clearly they overstate that amount. The purpose of dividing the patronato receipts is simply to try to standardize them by region by some sort of relevant indicator of the amount of medical service provision in each region. Bearing these caveats in mind—being sensitive to the potential problems of trying to read too much into these figures—the data show that there is considerable variation from region to region in the collection of patronato-directed funds. It was learned (in various team interviews) that there is some variation in the size of the "standard" contribution. In the Metropolitana Region, for example, it was reported that the user fee was two colones per outpatient visit. This was reported to also be the charge in Occidente Region (in both cases at health centers). But in a center in San Miguel (Oriente Region), the contribution was reported to be only one colone.

Knowing that Salvadorans are already paying user fees for MOH-provided services, the question is whether they can and will pay more. If it is the relatively lower quality of care—as measured by drug availability—that has encouraged the apparent growth in the bypass phenomenon, and that has caused the absolute and relative falling levels of both (1) output per facility and (2) share of total physician visits at the posts and units, and to a lesser extent the centers, vis-a-vis the hospitals, user fees may be just what the doctor ordered (with the proviso that the generated revenues be retained at the local facility level in a manner commensurate with the patronato-directed funds, i.e., be used to purchase drugs and other supplies).

A 1985 PRICOR prospective study of rural Honduras campesinos found that 96 percent of 1,017 households (6,353 individuals) interviewed said that they would be willing to pay the full price of curative care and drugs if the money stayed in the community. While no similar data are available for rural El Salvador, a Kraus International study of cofinancing options conducted on-site at MOH facilities found largely the same attitude (Kraus 1985).

The Kraus sample, however, is biased, rendering his conclusions, at best, questionable. His predictions should be construed as the maximum willingness to pay on the part of the general Salvadoran population. Since this is the only analysis done—to date on this important topic, it is important to evaluate the source of the bias, and try to assess its likely magnitude. Let us assess each of these sources of bias.

The Kraus Study (1985) consisted of interviewing patients who were already at MOH facilities waiting to be treated. By virtue of the interviews having been performed on only those who had already decided to seek medical care, and had decided to obtain it at an MOH facility, and further, who had already paid the travel time and transportation prices and at least part of the waiting time price associated with their MOH care, the responses of these individuals were likely to

be systematically different from others—from what the "average" Salvadoran's would likely be.

For example, an individual in need of medical care has a different degree of willingness to pay than one who is well. The magnitude of the difference in degree will be a function of his perceived need for care, which itself is related to the particular illness the individual has and the stage it is in. The case mix of the particular individuals who were interviewed, therefore, is an important factor influencing their ability and willingness to pay, and is not controlled for in the Kraus work. Moreover, since only 120 individuals were interviewed, the amount of weight given any single illness type in terms of the number of Salvadorans it is being (implicitly) construed as representing, is very large, underscoring the relevance of this consideration. We simply do not know if we should charge just for curative care services, or for preventive services too, or for some subset of either of these, or both; and this may be an important question.

The PRICOR-Honduras project researchers, for example, concluded from their interview survey work that the preventive, and especially MCH services should be provided free of charge. Kraus blurs the very important question of whether or not there should be differential charges for differential services based on what types of services the MOH is most interested in encouraging the use of, and what types it wants to provide fewer of. In economic terms, Kraus is implicitly assuming that the price elasticity of demand for all medical care goods and services is identical (or "close enough" to being equal). Although there is no basic medical care demand data available for El Salvador with which to estimate price elasticities, evidence collected in a variety of countries suggests that Kraus's implicit contention is untenable. This is an important allocative efficiency issue.

While directly controlling for case mix may have been difficult (and expensive—in terms of sample size), it could at least have been proxied by controlling for the type of facility in which the interview occurred. Although the Kraus study reports some of these data, their implications are not explored. Moreover, their examination suggests that this is another likely (and probably serious) bias of the study.

Significant for purposes of addressing the multitude of unanswered questions raised in this study about the falling utilization levels at health posts and units is the fact that over half of the interviews took place in the Metropolitana Health Region, and that not a single one was held in a health post. It is implied that the utilizers of puestos have the same willingness and ability to pay monetary prices for MOH services that hospital users do. This is most unlikely, and is almost certain to produce an upward bias in Kraus's estimates of the willingness and ability of MOH service users to pay user fees.

But that is not the only bias in the report. The individuals spoken with had already selected an MOH facility. How might such a person's characteristics differ from other Salvadorans' in general? Do they have the same degree of access to other providers? No. It is likely that those persons who are visiting an MOH facility at any particular moment in time have relatively greater access to that facility than the average Salvadoran has to one. If a person lives closer to a facility, for example, other things being equal, he is more likely to go to it. Therefore, he is more likely to be there when an interviewer pops in. Moreover, if an individual lives closer to a facility, how does his lower travel time price relate to his

willingness to pay a monetary fee? He is likely to be able to afford to pay more, because he is paying less, for instance, for bus transportation, or taking less time off work to visit the facility.*

If an individual has already decided to seek care, is already at the facility and in the process of purchasing that care, he is more apt to speak relatively highly of it. Humans consciously and unconsciously tend to alter their perceptions and views to rationalize decisions they make after they have made them. This is only natural—it is a survival and stress-reduction strategy, a coping mechanism to downplay potential sources of troublesome cognitive dissonance. What does this mean for the Kraus estimates? Again, it suggests that they are systematically biased—and too high.

Kraus's contention that 80 percent of all MOH clientele can be expected to pay for services is also overly optimistic. This estimate is based on the simple extrapolation of his sample to the general population. His sample in this regard, too, is biased. Those persons who have already decided to seek care and are in fact already in the process of receiving it from an MOH facility/provider, on average are likely to have greater access to care. This has already been noted, but another dimension of access that is directly pertinent to illustrating the inappropriateness of Kraus's extrapolation is that of income.

The individual who is already at the facility has not been deterred from receiving treatment by the various prices he must pay before he is able to obtain it. Other things being equal, the poorer individual who cannot afford to pay the price of transportation to get to the facility, or the opportunity cost (or price) of having to forgo working in order to receive care, or who is deterred by the humbling experience of being asked to make a "voluntary" contribution when he cannot afford it, is not to be found in the facility; the poor do not go there. One or more of these prices effectively deterred them from seeking out and obtaining care from the MOH. Thus, because the sample is biased toward the relatively more well-to-do, this estimate that 80 percent of Salvadorans turning to MOH providers can pay and do pay is overly optimistic. It overstates the willingness and ability of the average person to pay user fees.

In his 1985 narrative of on-site visits to two units and a center, Andrew Nicholls reported that the directors of these facilities reported that roughly half of their patients made a contribution for services received. This was the proportion also cited in interviews by members of the present team at health centers in the Metropolitana, Occidente, and Oriente Regions.

* The relative time and monetary prices that people are willing to pay are important to distinguish. Who, in general, are the persons most willing to trade off a money price for a time price (i.e., who would like to see an increase in the monetary user fee charge so as to increase the speed—reduce the time, because it is less crowded—with which he gets to actually see the provider)? Generally, it is not the unemployed or the chronically ill whose poor health interferes with being able to earn a livelihood.

We are left then with little faith in the representativeness of the Kraus sample, and hence little faith in his extrapolations therefrom of the total revenues that might be generated by the higher fees that his interviewees have said they would pay. But, given that most people are likely to (accurately—at least in this case) second-guess the purpose of such a line of questioning, they are likely to be reluctant to fully reveal their willingness and ability to pay user fees at MOH facilities. Kraus's approach to obtaining this data undermines its validity.

In sum, the methodology employed by Kraus is seriously flawed, and results in several biases. The biases, however, are probably in opposite directions with the end results, and (while unknown for certain) are perhaps not too wide of the mark. It nevertheless is important to note because there remain substantial and important issues related to medical care demand. And, since being able to identify the determinants of demand influencing Salvadorans' willingness and ability to purchase medical care in general is a prerequisite to accurate MOH planning, there remains an urgent need for medical care demand studies in which these same methodological mistakes are avoided.

Over the past three years, expenditures of patronato-directed funds—raised primarily (and increasingly so) from user fees—have been on average slightly less than 7 percent of the total general budget-funded expenditures of the health posts, units, and centers. It may be concluded that user fees are presently playing an important, supplementing role in these facilities. Given the prospect of the continuing financial plight of the MOH, it would be advisable to try to formalize, standardize, and raise the "voluntary contribution"/user fee. Standardization and formalization will likely lead to greater contribution levels. Moreover, if the MOH-Central Government decrees higher fee levels it will facilitate the effort at the local level to both raise the level and to collect the charge, because it will relieve the local provider of the onus of having to bear direct responsibility for the increase. However, it is imperative that control of the user fees remain in local hands to maintain the incentive structures—both for paying and for collecting the fees.

The consumers' motivation for paying for services is that they can see that the monies are used to directly improve the quality of the services they receive. The MOH-providers' motivation for conscientiously collecting the fees is that the monies directly give them the wherewithal to provide better services, and thus improve their job-satisfaction and self-satisfaction (which in light of what has been happening to their real levels of remuneration, must not be underestimated in terms of impact on morale).

How much should user fees be increased? At this point, without any information about the factors that influence Salvadorans' selection of physician/facility, the types of services they seek, or the level of care they want (i.e., without any data on the determinants of demand for medical care in El Salvador), the answer to this important question is necessarily speculative. The MOH is almost certainly going to remain financially strapped throughout the foreseeable future. If the bulk of the people of El Salvador are to continue to have access to any medical care, it would appear that they are, perforce, going to have to begin contributing more financially for MOH-provided care. Thus, it is time to begin the slow, evolutionary process of getting people to realize this and getting them accustomed to it. For now, a four colón figure would seem to be as good a guess as any. But this increase need not be the only change enacted. The area of drug

charge revenues is particularly appealing, and could be introduced in lieu of, or simultaneously with, the increase in the user fee. It might be decided that if the two measures are introduced concurrently, the user fee hike could be less; maybe only to three colones.

Specific User Fee Charges: Full Recovery Of Drug Costs—As explained in Appendix E, the maximum markup prices for imported drugs and pharmaceuticals are set by the Government. Whenever the MOH is going to make a large drug purchase, it is required by law to run advertisements in at least two of the largest newspapers to announce their intention, and to solicit bids. By so doing, the MOH is able to buy directly from wholesalers, and save at least a portion of the 25 percent markup on the wholesale price that is allowed retailers. To the extent that there is competition for the contracts, the Ministry may be able to further save a portion of the (additional) 25 percent markup that is allowed wholesalers above the legally recognized costs of production (see Appendix E for details of the marking-up process). This means that the MOH can purchase imported drugs and pharmaceuticals at prices considerably less than the health centers, units, and posts can purchase them at the pharmacies. To get an idea of what a savings of conceivably 20 to 45 percent could translate into given the volume of drug purchases in El Salvador, let us digress a bit, and look at an innovative program operated by the Catholic Church in the Western Region of the country.

In an interview with a priest in Sonsonate it was learned that his church has organized and sponsors 52 health promoters throughout the surrounding area. There are on average roughly three promoters assigned to each cantón. The church funds the initial purchase of a drug supply, consisting of a few (six to 10) essential drugs for each promoter. The church purchases them at prices discounted by 10 to 15 percent. The promoters sell the drugs to their clientele, who get not only medical advice, but also medicines at the same price they would have paid at the local pharmacy, but with the added advantage of not having had to actually travel to the nearest pharmacy. With the revenues from these sales the promoters are able to refurbish their supply of drugs, and they are allowed to keep the 300 to 350 colones per month that the 10 to 15 percent markup price differential generates.

That the price discount the Ministry of Health could obtain might be considerably greater on domestically produced drugs and pharmaceuticals than that obtained by the church, and that it could probably land a discount two to four times as large on imported pharmaceuticals, suggests that this may be a substantial source of revenue for the MOH. There are several potential problems, however. First, there is a basic conflict of wanting to move the MOH more into the area of prevention and promotion, as opposed to "pushing" drugs. Depending on the incentive structure actually developed, however, this problem could be obviated. If, for instance, the only salary to be "paid" to, for example an ARS, was to be that acquired as a proportion of drug sales, then there would be potential for serious abuse.*

* This type of abuse is likely to be less of a problem in the Sonsonate-based church project because the promoters are also working for "God." The potential for the development of avarice is not precluded, of course, but the "spiritual" component of their mission is certainly a tempering force.

But with the Regional Health Services offices gearing up for the implementation of the decentralization initiative, this might be a perfect time to set them up as the regional clearing house for patronato fund-based purchase orders of drugs that the health centers, units, and posts are already making from local pharmacies, at considerably higher prices. Since the regional health facilities are already purchasing significant amounts of these drugs, using the MOH's aggregated purchasing power to acquire and distribute these considerable price reductions would in and of itself be incentive to explore this possibility. Coupling this cost savings with Salvadorans' attraction to pharmaceuticals, the undeniable need for medicines in the delivery of modern health care, and (finally) the high probability that it is the lack of medicines in especially the posts, but also the units and centers, that has likely prompted many prospective MOH clients to bypass these facilities and turn instead to private physicians, to pharmacies, or to proceed to the higher levels of MOH-care—especially hospitals—this possibility looks very appealing—certainly worthy of a detailed investigatory analysis. Moreover, given the preceding considerations, and the MOH's poor financial health, this may be the avenue for undertaking some positive revenue raising (as opposed to simply cost-recovery) activities.

The strongest opposition to this approach is likely to come from the pharmacies—for this would be a scheme enabling development of some keen competitors for them. Most of the pharmacies, in fact, have probably enjoyed (though maybe only unconsciously) the last few years of MOH financial woes. These problems have almost certainly meant a greater volume of business and higher profits for pharmacies than they would otherwise have enjoyed.

The MOH public would probably prefer doing one-stop shopping rather than getting their prescription from the MOH provider and then having to go to a pharmacist to get it filled (as they have increasingly had to do).

Hospital User Fees And Patronato Funds—Like the health centers, units, and posts, the hospitals too are already levying user fees. Exhibits XLVIII, XLIX, and L present the amount of user fees collected by each of the 14 MOH hospitals for four categories of good and services for 1982 through 1984.

The totals and trends vary markedly by hospital. The two largest revenue generators are Rosales Hospital in San Salvador and San Juan de Dios in Santa Ana. They alone accounted for 31 percent of all hospital revenues in 1982, and by 1984 had increased their share to 45 percent. Both the absolute and relative incomes of Rosales and San Juan de Dios, Santa Ana, have increased; Rosales by 68 percent between 1982 and 1984, and San Juan de Dios by 25 percent. Most of the smaller hospitals in the meantime had suffered not only falling relative incomes but also falling absolute incomes. No hypothetical explanations for these very different patterns was developed.

Each of the hospitals, just like each of the centralized institutions, is mandated by law to have a patronato, or community health board, which is charged with raising, and managing monies for it. The only data that were assembled on the hospitals' patronato funds were for 1976, 1977, and 1979. The trends for the hospital funds (in the aggregate) follow a distinctly upward path, similar to that of the Centralized Agencies. Between 1975 and 1979, the outlays of the hospital patronato funds increased 68 percent. What the share of the user fees in the total patronato funds is was not learned. Unfortunately, most of the data gathered on

EXHIBIT LVIII
(Page 1 Of 2)

SOURCES OF HOSPITAL REVENUES FROM OTHER
THAN CENTRAL GOVERNMENT BUDGET ALLOCATION

<u>HOSPITAL</u>	1	9	8	2	<u>TOTALS</u>
	<u>SALE OF OTHER PRODUCTS AND MATERIALS</u>	<u>HOSPITAL SERVICES (PENSIONS)</u>	<u>LABORATORY SERVICES</u>	<u>OTHER AND CHANGES FOR SERVICES</u>	
Hospital Rosales, San Salvador	80.895	78.101	11.994	57.250	228.240
Hospital Benjamín Bloom, San Salvador	46.119	53.868	9.399	29.532	138.918
Hospital de Maternidad, San Salvador					
Hospital Psiquiátrico, San Salvador	25.000	72.000	2.000	5.000	104.000
Hospital de Neumología, San Salvador	10.214	5.630	4.966	29.750	50.560
Hospital "San Juan de Dios", Santa Ana	96.314	43.115	20.255	20.985	180.669
Hospital "Francisco Menéndez, Ahuachapán	23.070	57.021	8.799	16.736	105.626
Hospital de Sonsonate	32.356	22.989	5.807	8.066	69.218
Hospital "Dr. Luis Edmundo Vásquez", Chalatenango	1.000	3.400	9.000	5.000	18.400
Hospital "San Rafael", Nueva San Salvador	--	--	402	2.897	3.299
Hospital "Santa Gertrudis", San Vicente	19.441	21.950	25.339	18.068	84.798
Hospital "Santa Teresa", Zacatecoluca	45.379	30.292	5.942	13.976	95.589
Hospital "San Juan de Dios", San Miguel	--	26.616	20.734	89.985	137.335
Hospital "San Pedro", Usulután	<u>14.887</u>	<u>30.671</u>	<u>14.870</u>	<u>30.349</u>	<u>90.777</u>
T O T A L S	<u>394.675</u> =====	<u>445.653</u> =====	<u>139.507</u> =====	<u>327.594</u> =====	<u>1.307.429</u> =====

EXHIBIT LVIII
(PAGE 2 OF 2)

Footnote to Hospital Receipt Exhibit

In addition, the two largest hospitals had these additional revenues:

Hospital Rosales:

1982	¢ 56.549	410
	6.050	201
	7.684	215
1983	¢ 14.849	410
	8.980	201
	11.853	215
1984	¢ 5.358	410
	3.500	201
	6.192	215

Hospital Bloom:

1983	¢ 3.185	40
1984	48.424	

Where: 410 is unobligated funds carried over from the previous year.
201 is rental of undeveloped property.
215 is dividends, interest and public agency discount
from other state organizations.

EXHIBIT XLIX

SOURCES OF HOSPITAL REVENUES FROM OTHER THAN
CENTRAL GOVERNMENT BUDGET ALLOCATION

HOSPITAL	1	9	8	3	TOTALS
	SALE OF OTHER PRODUCTS AND MATERIALS	HOSPITAL SERVICES (PENSIONS)	LABORATORY SERVICES	OTHER AND CHANGES FOR SERVICES	
Hospital Rosales, San Salvador	94.920	88.105	15.881	57.843	256.749
Hospital Benjamín Bloom, San Salvador	55.539	64.873	14.665	34.878	169.955
Hospital de Maternidad, San Salvador					
Hospital Psiquiátrico, San Salvador	25.000	72.000	2.000	5.000	104.000
Hospital de Neumología, San Salvador	11.580	8.620	5.897	19.234	44.531
Hospital "San Juan de Dios", Santa Ana					
Hospital "Francisco Menéndez, Ahuachapán	25.513	50.951	5.024	9.781	91.269
Hospital de Sonsonate	40.129	27.046	6.190	9.622	82.987
Hospital "Dr. Luis Edmundo Vásquez", Chalatenango	2.591	2.424	6.620	3.559	15.194
Hospital "San Rafael", Nueva San Salvador	--	--	--	--	--
Hospital "Santa Gertrudis", San Vicente	25.969	15.205	16.671	17.105	74.950
Hospital "Santa Teresa", Zacatecoluca	62.169	32.526	10.440	17.769	122.904
Hospital "San Juan de Dios", San Miguel		31.092	14.792	89.388	135.272
Hospital "San Pedro", Usulután	18.702	28.626	10.140	32.331	89.799
TOTALS	362.112 =====	421.468 =====	107.520 =====	296.510 =====	1.187.610 =====

EXHIBIT L

SOURCES OF HOSPITAL REVENUES FROM OTHER THAN
CENTRAL GOVERNMENT BUDGET ALLOCATION

HOSPITAL	1	9	8	4	TOTALS
	SALE OF OTHER PRODUCTS AND MATERIALS	HOSPITAL SERVICES (PENSIONS)	LABORATORY SERVICES	OTHER AND CHANGES FOR SERVICES	
Hospital Rosales, San Salvador	168.724	126.591	25.342	62.238	382.895
Hospital Benjamín Bloom, San Salvador	38.243	51.435	8.965	37.149	135.792
Hospital de Maternidad, San Salvador					
Hospital Psiquiátrico, San Salvador	23.713	79.880	527	3.387	107.507
Hospital de Neumología, San Salvador	15.341	10.520	6.567	23.500	55.928
Hospital "San Juan de Dios", Santa Ana	109.279	54.632	37.649	24.595	226.155
Hospital "Francisco Menéndez, Ahuachapán					
Hospital de Sonsonate	36.606	29.060	7.441	10.273	83.380
Hospital "Dr. Luis Edmundo Vásquez", Chalatenango	2.187	1.924	2.861	3.360	10.332
Hospital "San Rafael", Nueva San Salvador					
Hospital "Santa Gertrudis", San Vicente	20.242	16.386	12.011	14.537	63.176
Hospital "Santa Teresa", Zacatecoluca	44.829	22.008	11.130	10.185	88.152
Hospital "San Juan de Dios", San Miguel		27.828	7.518	93.841	129.187
Hospital "San Pedro", Usulután	22.492	5.627	33.077	20.874	82.070
T O T A L S	481.156 =====	425.891 =====	153.088 =====	303.939 =====	1.364.574 =====

the hospitals remain unanalyzed because of the time constraint. It nevertheless is presented here and in annexes to facilitate the work of future analysts.

Between 1982 and 1984, the hospitals on average raised only 1.9 percent of the value of their total general budget-funded expenditures through user fees. This compares to the roughly 7 percent that the Centralized Agencies expended from their patronato funds. These figures, however, are not directly comparable. The hospitals' share does not include the patronato funds not derived from user fees. Recall that it was estimated that about 80 percent of the Centralized Agencies' patronato funds are derived from other than user fee sources. If the 20 percent is netted out of the Centralized Agencies' total it leaves about 5.5 percent. This 5.5 percent is still considerably more than the 1.9 percent of the hospitals. Part of this differential is attributable to the different case mixes and service types of the these two classes of institutions; namely the inpatient care of the hospitals (though the centers do provide these services as well). The hospitals, in addition, generally treat the more complex and patient-intensive cases. This means that on average they incur greater costs per patient, which makes cost recovery through user fees more difficult; to charge the same proportion of costs per person treated, they would have to charge each individual patient, on average, a significantly greater amount of money. In view of the differences, it is unrealistic to expect hospitals to be able to collect the same proportion of their costs as do the Centralized Agencies. An important but unanswered question remains: Are the hospitals charging enough?

The hospitals earn between one-quarter and one-third of their user fee income from the sale of relatively higher-quality room and board services, known as pensiones (see Exhibit LI). Based on a cursory review of the history of charges for pensiones and their low levels, it would appear that the level of these charges could be raised. Although the fee structures (presented in Appendix G) were just increased in January 1986—the first change in 10 years—their still very low levels suggest that the Government is still subsidizing these services. In fact, the charges are so low that it is possible that the cost of the quality differential may be greater than the fee charged for the pension. If this is indeed the case it would mean that the net subsidy provided to the users of these higher-quality services is greater than that provided to the general population through its free use of "standard" services. This is an important equity and efficiency issue and merits analysis. Whether or not a cross-subsidy of the type described exists, the low levels of these charges suggest that they could be increased, and by a fairly sizable proportion. Again, without further analysis the magnitude of any proposed hike would be only a guess. If, in light of the current MOH budgetary crisis, a number were to be suggested, one response might be to conduct a type of natural experiment: hike the rates for one or two of the hospitals in San Salvador (there because the cliente are likely to be relatively well-to-do) by 50 percent, and closely monitor what happens to utilization rates. In the event that the utilization rates of such facilities and services fall considerably, the increase in charges could be tempered.

(4) Leasing Or Selling The MOH Hospitals To The Private Sector

Another privatization option would be to lease or sell the MOH hospitals to the private sector. These possibilities have several attractive features, although because the feasibility of actually implementing either of them in El Salvador was not assessed, these options can only be evaluated on their theoretical merits.

EXHIBIT LI

PATRONATO FUNDS OF THE HOSPITALS, 1976, 1977, 1979*
(DOES NOT INCLUDE THE FIVE HOSPITALS IN SAN SALVADOR)

<u>HOSPITAL, CITY</u>	<u>1 9 7 6</u>		<u>1 9 7 7</u>		<u>1 9 7 9</u>	
	<u>RECEIPTS</u>	<u>OUTLAYS</u>	<u>RECEIPTS</u>	<u>OUTLAYS</u>	<u>RECEIPTS</u>	<u>OUTLAYS</u>
1. Hospital Francisco Menéndez, Ahuachapán	19.140	6.812	23.407	16.226	38.834	41.184
2. Hospital San Juan de Dios, Santa Ana	60.005	65.070	102.756	95.443	103.691	107.288
3. Hospital San Juan de Dios, Sonsonate	34.404	43.381	40.014	34.681	63.253	69.365
4. Hospital San Rafael, Santa Tecla	72.174	73.095	115.494	100.701	127.059	130.575
5. Hospital Dr. Luis Edmundo Vásquez, Chalatenango	46.454	44.555	55.103	53.868	68.142	66.085
6. Hospital Santa Gertrudis, San Vicente	42.938	46.758	56.545	53.240	69.872	73.099
7. Hospital Santa Teresa, Zacatecoluca	67.173	66.876	65.849	75.923	94.078	78.725
8. Hospital San Juan de Dios, San Miguel	76.395	74.656	88.307	80.533	133.708	162.219
9. Hospital San Pedro, Usulután	<u>43.396</u>	<u>50.960</u>	<u>77.849</u>	<u>77.599</u>	<u>61.094</u>	<u>63.139</u>
T O T A L S	<u>462.078</u> =====	<u>472.162</u> =====	<u>625.323</u> =====	<u>588.214</u> =====	<u>759.730</u> =====	<u>791.679</u> =====

* Unfortunately these were the only figures available. Since 1979 the hospitals patronato funds have not been reported (as they once were) in Salud Pública en Cifras. These data are available from the Oficina de Patronato of each of the 14 hospitals. Time constraints did not permit contacting them to update the information presented here.

Source: Salud Pública en Cifras 1976, p.56; 1978, p.27; 1979, p.26.

It is generally assumed that the private sector is far more efficient than the public sector; driven by the fear of (even potential) competition and lured by profits, private management is likely to behave in a more technologically (or operationally) efficient manner (although as already discussed, it may not be allocatively efficient). So motivated, private sector management attempts to create an environment—and specifically an incentive structure—that more closely ties rewards to level of effort. Such an organizational structure at least theoretically is conducive to maintaining morale and professional commitment.

In terms of the functioning of the MOH hospitals, private sector management would provide incentive to reduce excess capacity (i.e., to increase occupancy rates), which might be accomplished by the more conscious cultivation of private sector patients. In addition, there would be incentives to maintain the physical plant and equipment in good working order to maintain the quality of services so as to be able to market a differentiated product—high quality services.

The continued public ownership of the hospitals might be seen as desirable because the hospitals receive considerable support in terms of equipment and materials from international donor agencies, which would probably not be provided as readily or at as great a level as from private entities. It might be argued, however, that this would reduce the intensity of private management's ability to operate the hospitals as efficiently as they might otherwise, and that it might deter them from entering into a lease.

A more difficult issue to address would be that the continued public ownership of the institutions would mean that management would have far less freedom to maneuver in terms of its personnel. The relative security provided by the Ley de Salarios—although unanalyzed—is likely to compromise the urgency with which workers feel compelled to perform. Moreover, if the Central Government, and specifically the Ministry of Health, is still bankrolling the staff of the hospitals, the ability of management to reduce operating costs and/or to increase operating efficiency may inhibit any private management candidates from coming forward and "giving it a crack." On the other hand, to turn the hospitals over to the private sector would be difficult politically.

(5) Hiring Private Sector Management To Run The Hospitals

The appeal of hiring private sector management, and the difficult decisions and problems likely to be encountered in doing so would be very similar to those just discussed in the leasing option. The major difference would be that, depending on the price offered for the management services, this option would be easier to implement.

The issues of how much discretion to give the hirees, particularly with respect to personnel, would be a crucial consideration for determining both the potential efficiency gains to be realized and the political difficulties of implementation. It would be very difficult politically to simply grant the management corporation carte blanche with respect to personnel. After all, it was only a year ago that the public hospital workers strike occurred. The storming of Rosales by armed forces and the killing of several people—including a pregnant and about-to-deliver woman—is something that the public, and certainly the hospital workers, are not likely to have already forgotten.

Such a limitation of management prerogatives, it might be argued, would discourage any private managers from even considering the MOH offer. That need not be the case, however. It would be a relatively easy matter to construct some type of a "profit-sharing" scheme that would obviate this concern. To operationalize such a scheme, some sort of efficiency measures of the hospitals' past performance could be developed to serve as the benchmark against which the private management corporation's performance would be evaluated, and on which to base the "profit-sharing" scheme.

It is not clear, however, that there would be any takers—that any private sector entity would be interested in managing the MOH hospitals. Moreover, if the interested parties were current members of the private hospital sector of El Salvador, it is not at all self-evident that they would in fact improve the MOH hospital performance record. It would be reassuring to have some type of clause in a management lease agreement that would put the lessee at risk for at least partial payment in the event of a particularly poor performance. That, however, might simply guarantee that no private sector entities would be forthcoming, especially in light of the high start-up costs; i.e., the difficulties of getting initially acquainted with the system(s).

Given these various, oftentime cross-cutting considerations, it would seem best to first explore whether or not there would be any parties interested in the management option. In the event that there are, a pilot study/quasi-experiment involving a single hospital, for a fixed but multi-year contract, would seem to be the most reasonable approach.

(6) Contracting The Private Sector For Support Services

As has been noted in the discussion of the declining utilization of the public health care system, and particularly the health units and posts, there has been a history of poor performance in the areas of drug procurement and distribution as well as in vehicle maintenance and repair. In part, the latter problem has been the result of a relatively old vehicle fleet. Both of these problems have been recognized as bottlenecks to the provision of MOH services, and both have been topics of intensive study in the past three years.

There are essentially three possible contracting out options to be considered in the case of vehicles. The first is to hire a private sector firm to provide all of the MOH transportation services required for both medical supplies and medical personnel (the latter being particularly essential to continuing service provision by the mobile health units, which alone would require a substantial outlay).

The second possibility is to secure private sector services only to fulfill a supplementary role; to ensure the capability of being able to meet the infrequent and difficult-to-predict periods of unplanned increased transportation demands. The appeal of this alternative is that it would reduce vehicle requirements from peak-volume-accommodation levels to the (probably significantly lower) level necessary to be able to meet normal, regularly scheduled transportation needs.

The third option is to maintain the present system. If the MOH's present efforts to institutionalize effective, decentralized planning come to fruition, one of the products will be the enhanced efficiency of transportation services. This might be exemplified by the coordination of the delivery of medicines and other supplies to

the health posts (and other facilities along the way) with the weekly visit of the mobile health unit. Such a system could potentially be considerably more flexible and more cost-effective than the total contracting-out option.

There are several factors that would urge a wait-and-see approach at this time. First, it must be recognized that the future, with respect to both the vehicle and drug services records, is likely to be different from what it has been in even the very recent past. The efforts of Health Improvement Designs (HID), and the fruits of those efforts, are not to be overlooked. HID has already made significant strides of both procedural and substantive natures in both of these areas (see team member Barton Burkhalter's report for details).

In light of the considerable progress currently being made, coupled with the long history of AID commitment to enhancing the effectiveness of both of these vital support services, it would be best to continue supporting the work of HID on an ongoing basis.

Let us look a bit more closely at these two considerations. The HID team has developed an intimate working relationship with the Ministry, which has taken time to cultivate, and is only now starting to bear fruit. Moreover, its efforts have not focused narrowly on "only" improving the effectiveness and efficiency of these two types of services. HID, instead, has in essence defined the problem as an administrative/management bottleneck, which portions of the preceding discussion testify to as an accurate assessment. Furthermore, HID (specifically, Dr. Reinaldo Grueso) is currently involved in some vital and very creative training exercises on a pilot study basis in the Occidente Health Region to prepare regional health personnel for their new and considerably expanded responsibilities associated with the proposed decentralization scheme. If the Ministry's plan to implement effective health planning is to be successful, efforts such as this are essential. We cannot and should not expect that a major institutional change such as decentralization can just happen; to be successful, it will require training and technical assistance. HID is currently providing that assistance, and providing it effectively. To prematurely withdraw support of the HID project, therefore, would be a mistake.

The second consideration is AID's long history of trying to improve the MOH's capabilities in drug procurement and distribution and in the maintenance and repair of MOH vehicles. To abandon these efforts when they are just beginning to pay off would be a waste of money, and far more seriously, a squandering of "political capital." Such an abandonment would constitute a major AID policy reversal, and would manifest a lack of communication with, understanding of, and respect for the Ministry of Health. It could only serve to alienate AID/ES from the Ministry of Health.

(7) Private Fee-For-Coverage

As already noted, the particular mechanism used to finance health care service provision gives rise to a particular incentive structure. Another possible financing mechanism that might be explored in El Salvador is that of fee-for-coverage; i.e., the payment by individuals for guaranteed access to care when and if they become ill or desire preventive services. This system could be adopted as an alternative to relying on MOH-provided services.

In such a scheme the medical care providers are hired on a full-time basis by an easily identifiable group of people (e.g., a community). Each member of the community contributes a predetermined amount, which together becomes the income paid to retain the medical care provider. The size of the contribution is a function of two factors: (1) the number of people who are to be covered and (2) the number and type of medical personnel to be retained. The medical personnel then provide care either free of charge or for a nominal additional fee (if the community decides that it would be more appropriate—e.g., to deter unnecessary utilization).

Such a scheme could be introduced into a community that currently does not have what it perceives to be "adequate" access to care. The most obvious candidate would be the agricultural cooperatives formed as a result of Phase I of the Agrarian Reform. They are clearly identifiable and self-contained entities that would facilitate the administration process. Member contributions could be extracted from the cooperative's collective income before it is divided up and distributed to members. Since, according to the Salvadoran Institute of Agrarian Transformation (ISTA), as of July 1985 there existed 317 cooperatives with approximately 15 percent of the total rural population (64,000 families, or 382,000 individuals), if successfully implemented, this approach could fundamentally restructure the delivery of health care in El Salvador. The individual health care providers on the cooperatives might be interested in maintaining a liaison with the MOH, or they might want to develop their own professional camaraderie; to facilitate the sharing of ideas and methods; and perhaps to purchase supplies more cheaply (by obtaining volume discounts).

It was learned from the team anthropologist/social analyst, N. Macpherson Chapin, that one such effort on an agricultural cooperative had been attempted, but had failed. A similar effort to fund a teacher on another cooperative also failed. In both instances, the members of the cooperative slowly began to resist the docking of their income shares to cover the costs of the salaries of these professionals, until before long (about six months) they, in union, cut off their support.

The question is, Why did they do so? Did they feel that the services they were receiving should have been provided by the Government "free" of charge? Did they feel that the services of the particular individuals serving them were inferior? Or, was it that they simply could not financially afford the services? It may also be that other factors entered into the decision. Moreover, it is not clear if these were isolated incidents, or if similar efforts would meet with the same result. Further analysis is necessary to adequately answer these questions.

F. BACK TO EFFICIENCY CONSIDERATIONS: SOCIAL SECURITY INSTITUTE-RELATED ISSUES

A current topic of particular relevance and great visibility in Salvadoran national health politics is the discussion of the increased cooperation, coordination, and possible eventual merging of the Ministry of Health and the Salvadoran Social Security Institute (ISSS). Apparently this has been a topic of discourse in El Salvador for nearly a decade. As present however, progress toward this end is being recorded, suggesting that the time and the personalities are right. A three-part agreement between the Ministry of Health and the Social Security Institute is due to be signed in mid-July.

The three-part document establishes (1) a general agreement in principle to work toward greater cooperation and coordination between the ISSS and the MOH, (2) a specific working agreement between the two agencies with regard to the particular types of services and equipment they are to share and their respective reimbursement rates for each, and (3) a listing of the specific drugs and pharmaceuticals that the two agencies' basic drug lists (cuadro basicos) have in common, with an agreement to purchase them jointly so as to be able to obtain greater quantity discounts. According to ISSS Director Jorge Bustamante, this is the first step toward the eventual merging of the two hospital systems, a complex political, administrative, and technical process that he expects to take at least 10 years just to begin to realize.*

Since 1954, ISSS has had two basic funds: one a health services fund, the other a retirement/pension fund. Since its inception, the health services fund, or General Health Regime, has been funded by contributions from the employee, the employer, and the state (specifically, the Ministry of Hacienda). The funding scheme for underwriting the Health Regime has been altered twice. The present contribution levels, which were instituted in 1978, are 2.5 percent of the employee's salary contributed by the employee, an additional 6.25 percent is contributed by the employer, and the state—which prior to 1978 likewise paid in a set fraction of the employee's salary—now contributes approximately 5 million colones per year (a figure that was intended to be adjusted every five years). Both percentage contributions are paid only on the first 700 colones per month of income. Thus, those whose income is less than or equal to 700 colones per month pay 2.5 percent of their income into the fund. Those whose income is greater than this amount, however, pay less of their income as a percent. For instance, if an individual has an income of 1,400 colones per month, he still pays at most 2.5 percent on his 700 colones monthly income, or a maximum amount of 1.925 colones per month. For the person who earns 1,400 colones monthly this represents 1.25 percent of his income. Hence the social security tax is, overall, regressive, while for incomes up to the cap of 700 colones per month the tax is proportional, taking the same 2.5 percent of every covered worker's income. For those Salvadorans fortunate enough to earn more than 700 colones a month, as income increases beyond this level, the tax takes a smaller percentage of their total income, and hence is, overall, a regressive tax.

The General Health Regime has always had only very limited coverage of the general population, never exceeding 8 percent. Starting in 1979, a Special Regime of Health was established. It extended ISSS coverage to workers in the Western and Eastern zones of the country. According to Bustamante, the coverage was not extended to government workers country-wide because the Central Government could not afford to make the contributions for all of the many government workers who are concentrated in San Salvador.

* Bustamante further reported in the same interview that ISSS is in the process of developing similar working agreements (including joint purchases) with ANTEL and Bienestar Magisterial, the Government Telecommunications Workers, and the public school teachers' health services agencies.

The Special Regime of Health increased coverage by about 14 percent (see Exhibit LIII). Required contributions from both employee and employer are less for the Special Regime than for the General Regime. Employees contribute 2.23 percent; the employer (the state) contributes 5.57 percent. As under the General Regime, these percentages are paid on only the first 700 colones of monthly income.

Under both Regimes the coverage is the same: the worker (i.e., the active dues payer), his/her spouse, and children up to the age of six months are covered. It may be the very limited coverage of children that has prompted some of the members to also purchase and/or to obtain as a fringe benefit additional insurance coverage. There are at least businesses (overwhelmingly made up of banks) that, together with their workers, simultaneously pay into the ISSS Health Fund and enjoy coverage from some other source—generally it is a couple of permanently hired medical care providers (see Appendix H for a listing).

Since 1979, the war, decapitalization, and falling income levels have together destroyed much of the industrial base employing the type of labor that constituted the backbone of ISSS contributors. Manufacturing employment fell about 18 percent between 1979 and 1982 (World Bank 1985, p.26). As a result, ISSS has suffered from a fall in dues-paying members. Its coverage of the general population has fallen by about 15 percent, despite the fact that the addition to its ranks in the form of the Special Regime added about the same fraction. Without that extension, ISSS's coverage of the population would have fallen much more markedly. As it is, ISSS now provides health services for less than 7 percent of the Salvadoran people.

Director Bustamante reported in an interview that although prior to 1979 the Health Regime was in good financial shape, it has since accumulated a debt of about 50 million colones. The fund has been squeezed between falling dues payments and rapidly rising health care costs. Bustamante noted that the total health program's costs have increased tenfold in the past five years. The Central Government (again, specifically the Ministry of Hacienda) has provided ISSS with a 22 million colón subsidy, in addition to the Government's regular annual contribution of 5 million colones, for servicing and (partial) repayment of the debt the Institute accumulated between June 1984 and April 1986.

There are five dimensions to the equity issue that merit attention in any analysis of the operations of ISSS vis-a-vis the Ministry of Health:

- The total Central Government contribution per person covered by ISSS Health Regimes (both the General and the Special) in 1985 was approximately 86 colones. This figure is 2.2 times the Central

EXHIBIT LII

**ISSS: POPULATION COVERAGE OF THE
REGIME OF HEALTH, 1981-1985**

A. Population Coverage of the ISSS General Regime of Health

TYPE OF INSURED	1981	1982	1983	1984	1985
Active Dues Payers	182,115	184,576	200,210	194,832	198,514
Other Beneficiaries ²	78,127	79,183	85,890	83,583	87,722
Retirees ³	4,280	4,700	4,948	5,636	5,966
Total	264,522	268,459	291,048	284,051	292,202

B. Covered Population Of The ISSS Special Regime Of Health¹

TYPE OF INSURED	1981	1982	1983	1984	1985
Active Dues Payers	27,829	24,819	27,642	24,227	27,726
Other Beneficiaries	11,939	10,647	11,858	10,393	11,894
Total	39,768	35,466	39,500	34,620	39,620

C. Overall Regime of Health Covered Population

TYPE OF INSURED	1981	1982	1983	1984	1985
Active Dues Payers	209,944	209,395	227,852	219,059	226,240
Other Beneficiaries	90,066	89,830	97,748	93,976	99,616
Retirees	4,280	4,700	4,948	5,636	5,966
Grand Total	304,290	303,925	330,548	318,671	331,822

¹ This system was started in 1979 and covers workers in state (Government) service in the Western and Eastern Zones.

² Other Beneficiaries: spouses or "significant others" (lifetime companions i.e., unidos) of the active dues-paying insured and of the retirees.

³ Retirees: Those receiving a disability or old age pension who pay dues to the Regime of Health

Government per capita contribution to the Ministry of Health (see Exhibit LIV for the ISSS computation).*

- o The 331,822 ISSS beneficiaries had 136,859,300 colones "worth" of health services in 1985 for a per capita expenditure of 412.45 colones relative to the Ministry of Health's 39.64 colones per capita expenditure that year.**
- o The ISSS increased its per capita expenditures by 11.3 percent from 1984 to 1985, while the MOH experienced a 5 percent drop in its expenditures (both are based on total nominal expenditure figures).
- o In 1985, ISSS's hospitals and centers had an average occupancy rate of 56.8 percent. Although neither 1984 nor 1985 data were obtained for MOH hospitals, their 1979-1983 average occupancy rate averaged 67.8 percent.***
- o The basic tax structure of El Salvador, which raises the government revenues used to subsidize the relatively well-to-do ISSS workers, is regressive (see Exhibit) further heightening the absolute level of the subsidy from the/relatively poor to the relatively rich.

The implications of these considerations for the efficiency of public health care delivery, for the preservation of a two-class system of public health care with markedly different levels of quality, and for income distribution, together make it exceedingly difficult to justify the further subsidization of ISSS.

Without question, the fact that ISSS has started to work with the Ministry of Health is welcome news. Yet, in light of the preceding analysis, which unambiguously demonstrates the astonishingly marked degree of inequality in the Central Government's support of this tiny fraction of the population relative to the MOH's clientele, one can hardly help but speculate as to whether or not the current efforts of ISSS to work with the Ministry are not intended to distract and/or co-opt critics. That the timetable involved is such a protracted one only serves to generate further aspersions. To ask the general population to sacrifice, and to continue to sacrifice more (for there is no foreseeable turnaround in ISSS's predicament) so that a tiny proportion of the relatively well-to-do can sustain

* Based on data contained in the Informe de Labores del ISSS, 1985: p. 9, Direccion General del ISSS, 28 de febrero de 1986; the MOH figure is computed from Exhibits I and XXV, and is based on the total population of El Salvador net of those covered by ISSS.

** Based on figures contained in the Informe de Labores del ISSS, 1985, 1986, pp.2 and 9. The MOH figure is based on computations from data contained in Exhibits I and XXV.

*** Based on data in Cuadro IV, Estadisticas de Salud, 1985, Unidad de Planificacion, Dept. de Actuariado y Estadistica, ISSS, 1986. The MOH data come from Salud Publica en Cifras, 1979-1983, MSPAS, 1980-1984.

their claim to a disproportionate amount of the health resources of El Salvador (however implicit, indirect, or veiled that request) is to invite continued social unrest. While the rest of Salvadorans may not be aware of or privy to the budget allocation process that maintains these vast social inequities, they are unlikely to be as blind to its conspicuously inequitable outcome: the maintenance of two very different levels of public health care.

Obviously there are several major, relevant political considerations. First, it is not at all clear that squashing the ISSS's extraordinary subsidy would mean anything more for the MOH. In fact, it most likely would not, although that might depend—at least in the future—on how the two agencies' budgets might be linked. Second, ISSS is an important, powerful, and vociferous political force. The small and embattled middle class of Salvadorans is becoming increasingly disaffected with the Government and its various austerity measures. Any government attack on or lack of support for ISSS could risk (further) alienating this segment of the Salvadoran population. It would seem that this is (another) no-win situation for the Government.

It is very difficult to say what might become of the effort to "give" the MOH hospitals to ISSS or to merge the two organizations more wholistically. They have such different clientele in terms of income, tastes, and disease profiles, and, as a result, great disparities in terms of their case mixes. Given the magnitude of the resources involved, however, further explorations and analyses are in order.

EXHIBIT LIII

EVALUATION MATRIX FOR
ALTERNATIVE EFFECTIVE RESOURCE
ENHANCEMENT SCHEMES

	ALLOCATIVE EFFICIENCY	TECHNOLOGY EFFICIENCY	ADMINISTRATION FEASIBILITY	EQUITY	CONSUMER ACCEPTANCE	PROVIDER ACCEPTANCE	POLITICAL ACCEPTANCE
<u>Taxes</u>							
a. Cigarette and Tobacco	o	o	+	+	o	o	-
b. Lottery	o	o	+	+	o	o	-
<u>User Fees</u>							
a. Price of visit	+	+	+	+/-	+/-	+	+/-
b. Drugs	+/-	+/-	+/-	+	+/-	+	+/-
c. Pensions	+	+	+	+	+/-	+	+
<u>Total Privatization</u>	-	+	-	-	-	o	-
<u>Sell-Lease Hospitals To Private Sector</u>	-	+	+	-	-	+	-
<u>Hire Private Hospital Management Corp.</u>	+	+	+	-	+	+	+/-
<u>Contract Out For Support Services</u>							
a. Vehicles	+	+	-	o	o	+	-
b. Drugs	+	+	-	o	o	+	-
<u>Fee-For-Coverage</u>	+	+	+	+/-	-	+	+/-
<u>Hospitals-ISSS</u>	+	+	-	+	+/-	+/-	-

KEY

+ Positive view of/impact on

- Negative view of/impact on

o Undetermined or neutral view of/impact on

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APPENDIX A

APPENDIX A

CONSUMER PRICE INDEX
(BASE: 1978)

<u>YEAR</u>	<u>CPI</u>	<u>ANNUAL RATE OF CPI INCREASE</u>
1975	71.5	19.1
1976	76.6	7.1
1977	85.6	11.7
1978	97.0	13.3
1979	108.7	12.1
1980	127.6	17.4
1981	146.4	14.7
1982	163.6	11.7
1983	185.1	13.1
1984	206.7	11.7
1985	252.4	22.1

Source: Unpublished memo, Banco Central de Reserva de El Salvador.

APPENDIX B

EXHIBIT B-1
OPERATIONS ALLOCATIONS BY PROGRAMS AND
GENERAL CLASSES AT THE MOH'S CENTRALIZED AGENCIES, 1986
(COLONES)

PROGRAMS AND SUBPROGRAMS:	GENERAL CLASSES:	TOTALES	PERSONNEL SERVICES	NON-PERSONNEL SERVICES	MATERIALS AND SUPPLIES	MACHINERY AND EQUIPMENT	REGULAR TRANSFERS
101	Top Administration	778.880	737.070	26.070	13.320	--	2.420
102	General Administrative Services	21.728.650	4.740.040	413.000	16.573.670	--	1.940
	019 Central Administration	5.651.680	4.740.040	413.000	496.700	--	1.940
	029 Departmental supplies and materials	16.076.970	--	--	16.076.970	--	--
103	Health Services Planning	785.350	711.660	22.730	50.960	--	--
104	Health Engineering	725.510	690.810	5.680	27.160	--	1.860
105	Normative Technical Services	1.619.780	1.550.700	56.380	12.700	--	--
106	Operative Health Services	55.436.400	52.736.220	451.830	2.236.560	--	11.790
	019 Regional Health Services	49.793.060	47.506.590	401.370	1.875.910	--	9.190
	029 Malariology	4.846.210	4.446.220	41.540	356.450	--	2.000
	039 Laboratory Services	797.130	783.410	8.920	4.200	--	600
107		2.439.670	2.286.140	57.600	95.930	--	--
T O T A L S		83.514.240	63.452.640	1.033.290	19.010.300	0.0	18.010

Source:

Source: Ley de Presupuesto, Diario Oficial, 21 de Diciembre de 1985, Tomo No.289, Número 243, pp.162-168.

EXHIBIT B-2
OPERATIONS EXPENDITURES BY PROGRAMS AND
GENERAL CLASSES AT THE MOH'S CENTRALIZED AGENCIES, 1985
(COLONES)

PROGRAMS AND SUBPROGRAMS:	GENERAL CLASSES: 	TOTALES	PERSONNEL SERVICES	NON-PERSONNEL SERVICES	MATERIALS AND SUPPLIES	MACHINERY AND EQUIPMENT	REGULAR TRANSFERS
101	Top Administration	689.142	657.702	20.180	11.259	--	--
102	General Administrative Services	8.743.521	4.506.023	538.600	3.696.057	1.576	1.265
	019 Central Administration	5.404.952	4.506.023	538.600	359.064	--	1.265
	029 Departmental supplies and materials	3.338.569	--	--	3.336.993	1.576	--
103	Health Services Planning	2.646.627	2.500.536	63.153	82.638	--	300
104	Health Engineering	738.048	726.946	4.055	7.048	--	--
105	Normative Technical Services	1.405.758	1.371.422	25.339	7.417	--	1.580
106	Operative Health Services	52.595.611	50.009.520	1.030.965	1.544.318	--	10.808
	019 Regional Health Services	47.775.987	45.329.606	984.979	1.450.894	--	10.508
	029 Malariology	4.101.910	3.977.955	33.118	90.836	--	--
	039 Laboratory Services	717.714	701.958	12.867	2.588	--	300
T O T A L S		66.818.707	59.772.149	1.682.293	5.348.736	1.576	13.952

Source: Informe Complementario Constitucional, 1985. Ministerio de Hacienda, Dirección de Contabilidad Central, 1986.

EXHIBIT B-3
OPERATIONS EXPENDITURES BY PROGRAMS AND
GENERAL CLASSES AT THE MOH'S CENTRALIZED AGENCIES, 1984
(COLONES)

PROGRAMS AND SUBPROGRAMS:	GENERAL CLASSES:	TOTALES	PERSONNEL SERVICES	NON-PERSONNEL SERVICES	MATERIALS AND SUPPLIES	MACHINERY AND EQUIPMENT	REGULAR TRANSFERS
101	Top Administration	635.331	607.539	17.925	9.268	--	600
102	General Administrative Services	6.324.933	3.809.975	355.562	2.152.832	3.150	3.414
019	Central Administration	4.560.062	3.809.975	355.562	391.110	--	3.414
029	Departmental supplies and materials	1.764.872	--	--	1.761.722	3.150	--
103	Health Services Planning	2.116.895	1.990.125	41.500	85.270	--	--
104	Health Engineering	693.939	678.153	4.049	11.737	--	--
105	Normative Technical Services	1.293.554	1.272.171	824	18.559	--	--
106	Operative Health Services	49.651.766	47.519.755	431.553	1.689.849	--	10.609
019	Regional Health Services	44.336.837	42.424.240	394.336	1.509.777	--	8.484
029	Malariology	4.549.867	4.338.937	31.516	177.690	--	1.825
029	Laboratory Services	765.062	756.678	5.702	2.382	--	300
T O T A L S		60.716.418	55.879.718	851.412	3.967.515	3.150	14.623

Source: Informe Complementario Constitucional, 1984. Ministerio de Hacienda, Dirección de Contabilidad Central, 1985.

EXHIBIT B-4
OPERATIONS EXPENDITURES BY PROGRAMS AND
GENERAL CLASSES AT THE MOH'S CENTRALIZED AGENCIES, 1983
(COLONES)

PROGRAMS AND SUBPROGRAMS:	GENERAL CLASSES:	TOTALES	PERSONNEL SERVICES	NON-PERSONNEL SERVICES	MATERIALS AND SUPPLIES	MACHINERY AND EQUIPMENT	REGULAR TRANSFERS
101	Top Administration	557.981	530.635	16.663	10.451	--	230
102	General Administrative Services	9.698.069	3.803.183	270.904	5.621.533	--	2.449
019	Central Administration	4.254.838	3.595.624	270.904	385.861	--	2.449
029	Departmental supplies and materials	5.443.231	207.559	--	5.225.672	--	--
103	Health Services Planning	1.964.714	1.830.373	67.447	66.894	--	--
104	Health Engineering	713.767	658.512	3.897	51.058	--	300
105	Normative Technical Services	1.233.347	1.228.845	2.219	2.283	--	--
106	Operative Health Services	42.953.223	41.112.867	409.102	1.421.350	--	9.905
019	Regional Health Services	38.315.613	36.683.288	388.756	1.235.175	--	8.395
029	Malariology	3.907.712	3.711.805	11.654	183.041	--	1.210
039	Laboratory Services	729.898	717.771	9.893	3.134	--	300
T O T A L S		57.121.100	49.164.414	770.222	7.172.569	0	12.884

Source: Informe Complementario Constitucional, 1983. Ministerio de Hacienda, Dirección de Contabilidad Central, 1984.

EXHIBIT B-5
OPERATIONS EXPENDITURES BY PROGRAMS AND
GENERAL CLASSES AT THE MOH'S CENTRALIZED AGENCIES, 1982
(COLONIES)

PROGRAMS AND SUBPROGRAMS:	GENERAL CLASSES:	TOTALES	PERSONNEL SERVICES	NON-PERSONNEL SERVICES	MATERIALS AND SUPPLIES	MACHINERY AND EQUIPMENT	REGULAR TRANSFERS
101	Top Administration	479.054	454.740	14.065	9.038	--	1.210
102	General Administrative Services	10.320.310	3.475.299	287.015	6.549.332	6.285	2.378
	019 Central Administration	4.137.177	3.459.671	287.015	388.113	--	2.378
	029 Departmental supplies and materials	6.183.133	15.628	--	6.161.219	6.285	--
103	Health Services Planning	1.858.979	1.684.871	71.565	101.176	--	1.367
104	Health Engineering	704.977	622.109	3.333	79.535	--	--
105	Normative Technical Services	1.160.636	1.129.299	20.522	10.816	--	--
106	Operative Health Services	41.844.025	39.894.317	518.212	1.419.027	--	12.469
	019 Regional Health Services	37.415.095	35.604.285	480.390	1.322.983	--	7.437
	029 Malariology	3.755.985	3.629.431	27.801	93.721	--	5.032
	039 Laboratory Services	672.945	660.600	10.021	2.323	--	--
T O T A L S		56.367.981	47.260.635	914.712	8.168.924	6.285	17.425

Source: Informe Complementario Constitucional, 1982. Ministerio de Hacienda, Dirección de Contabilidad Central, 1983.

EXHIBIT B-6
OPERATIONS EXPENDITURES BY PROGRAMS AND
GENERAL CLASSES AT THE MOH'S CENTRALIZED AGENCIES, 1981
(COLONES)

PROGRAMS AND SUBPROGRAMS:	GENERAL CLASSES:	TOTALES	PERSONNEL SERVICES	NON-PERSONNEL SERVICES	MATERIALS AND SUPPLIES	MACHINERY AND EQUIPMENT	REGULAR TRANSFERS
101	Top Administration	420.548	393.330	15.904	11.813	--	--
102	General Administrative Services	15.845.249	3.500.789	226.371	12.113.453	1.588	3.050
	019 Central Administration	4.139.112	3.500.789	225.858	409.002	--	3.050
	029 Departmental supplies and materials	11.706.037	--	513	11.704.450	1.588	--
103	Health Services Planning	1.822.794	1.668.120	68.117	86.557	--	--
104	Health Engineering	1.050.140	917.734	12.696	119.716	--	--
105	Normative Technical Services	1.051.251	1.027.738	16.707	6.506	--	300
106	Operative Health Services	42.571.690	39.914.764	513.509	2.117.974	--	25.442
	019 Regional Health Services	37.917.379	35.410.417	489.016	1.998.585	--	19.265
	029 Malariology	3.950.966	3.827.088	5.522	112.478	--	5.878
	039 Laboratory Services	693.345	677.259	8.876	6.911	--	300
T O T A L S		62.761.678	47.422.474	853.305	14.455.520	1.588	28.795

Source: Informe Complementario Constitucional, 1981. Ministerio de Hacienda, Dirección de Contabilidad Central, 1982 .

EXHIBIT B-7
OPERATIONS EXPENDITURES BY PROGRAMS AND
GENERAL CLASSES AT THE MOH'S CENTRALIZED AGENCIES, 1980
(COLONES)

PROGRAMS AND SUBPROGRAMS:	GENERAL CLASSES:	TOTALES	PERSONNEL SERVICES	NON-PERSONNEL SERVICES	MATERIALS AND SUPPLIES	MACHINERY AND EQUIPMENT	REGULAR TRANSFERS
101	Top Administration	454.206	424.867	21.909	7.180	--	250
102	General Administrative Services	13.764.927	3.314.918	260.982	10.068.174	117.861	2.992
	019 Central Administration	3.995.892	3.314.918	260.982	416.999	--	2.992
	029 Departmental supplies and materials	9.769.035	--	--	9.651.175	117.861	--
103	Health Services Planning	1.825.324	1.589.283	81.778	151.749	--	2.515
104	Health Engineering	1.174.213	950.562	5.880	177.470	--	300
105	Normative Technical Services	995.074	937.902	44.780	11.831	--	560
106	Operative Health Services	41.505.600	38.927.212	562.701	2.002.745	--	12.941
	019 Regional Health Services	35.512.841	33.089.969	524.405	1.883.233	--	10.233
	029 Malariology	5.301.936	5.167.101	24.360	108.068	--	2.408
	039 Laboratory Services	690.822	670.142	13.937	6.444	--	300
T O T A L S		59.719.344	46.184.744	978.031	12.419.149	117.861	19.559

Source: Informe Complementario Constitucional, 1980. Ministerio de Hacienda, Dirección de Contabilidad Central, 1981.

EXHIBIT B-8
OPERATIONS EXPENDITURES BY PROGRAMS AND
GENERAL CLASSES AT THE MOH'S CENTRALIZED AGENCIES, 1979
(COLONES)

PROGRAMS AND SUBPROGRAMS:	GENERAL CLASSES:	TOTALES	PERSONNEL SERVICES	NON-PERSONNEL SERVICES	MATERIALS AND SUPPLIES	MACHINERY AND EQUIPMENT	REGULAR TRANSFERS
101	Top Administration	443.435	402.278	29.169	11.688	--	300
102	General Administrative Services	11.400.993	2.689.295	256.416	8.440.629	13.268	1.385
	019 Central Administration	3.338.259	2.689.295	256.416	391.163	--	1.385
	029 Departmental supplies and materials	8.062.734	--	--	8.049.466	13.268	--
103	Health Services Planning	1.490.173	1.331.062	65.605	92.606	--	900
104	Health Engineering	892.770	771.987	7.875	112.908	--	--
105	Normative Technical Services	803.947	791.596	7.097	4.656	--	598
106	Operative Health Services	32.356.453	30.458.519	485.022	1.403.255	--	9.657
	019 Regional Health Services	27.247.779	25.459.688	458.063	1.320.670	--	9.357
	029 Malariology	4.556.535	4.457.772	21.016	77.448	--	300
	039 Laboratory Services	552.139	541.060	5.943	5.136	--	--
T O T A L S		47.387.770	36.444.738	851.183	10.065.741	13.268	12.840

Source: Informe Complementario Constitucional, 1979. Ministerio de Hacienda, Dirección de Contabilidad Central, 1980 .

EXHIBIT B-9
OPERATIONS EXPENDITURES BY PROGRAMS AND
GENERAL CLASSES AT THE MOH'S CENTRALIZED AGENCIES, 1978
(COLONES)

PROGRAMS AND SUBPROGRAMS:	GENERAL CLASSES:	TOTALES	PERSONNEL SERVICES	NON-PERSONNEL SERVICES	MATERIALS AND SUPPLIES	MACHINERY AND EQUIPMENT	REGULAR TRANSFERS
101	Top Administration	403.692	381.786	17.450	4.156	--	300
102	General Administrative Services	13.960.870	2.482.890	222.233	11.249.019	3.970	2.759
	019 Central Administration	3.098.020	2.482.890	222.233	390.139	--	2.759
	029 Departamental supplies and materials	10.862.850	--	--	10.858.880	3.970	--
103	Health Services Planning	1.312.674	1.154.496	76.719	81.159	--	300
104	Health Engineering	837.207	706.961	9.018	119.417	--	1.812
105	Normative Technical Services	698.468	698.456	12	--	--	--
106	Operative Health Services	26.729.615	24.792.259	437.470	1.488.942	--	10.944
	019 Regional Health Services	22.441.179	20.680.284	395.376	1.354.407	--	10.111
	029 Malariology	3.812.167	3.646.214	34.447	130.934	--	573
	039 Laboratory Services	476.269	465.761	6.647	3.601	--	260
T O T A L S		43.942.525	30.216.847	762.902	12.942.592	3.970	16.114

Source: Informe Complementario Constitucional, 1978. Ministerio de Hacienda, Dirección de Contabilidad Central, 1979.

EXHIBIT B-10
OPERATIONS EXPENDITURES BY PROGRAMS AND
GENERAL CLASSES AT THE MOH'S CENTRALIZED AGENCIES, 1977
(COLONES)

PROGRAMS AND SUBPROGRAMS:	GENERAL CLASSES:	TOTALES	PERSONNEL SERVICES	NON-PERSONNEL SERVICES	MATERIALS AND SUPPLIES	MACHINERY AND EQUIPMENT	REGULAR TRANSFERS
101	Top Administration	324.218	300.589	17.052	6.106	--	470
102	General Administrative Services	20.556.549	2.302.729	176.496	18.037.739	38.880	705
019	Central Administration	2.858.748	2.302.729	176.496	378.818	--	705
029	Departmental supplies and materials	17.697.801	--	--	17.658.921	38.880	--
103	Health Services Planning	1.040.433	878.523	88.185	72.885	--	840
104	Health Engineering	549.326	477.859	13.743	57.424	--	300
105	Normative Technical Services	690.108	685.940	3.868	--	--	300
106	Operative Health Services	21.904.279	20.191.168	339.031	1.363.987	--	10.092
019	Regional Health Services	18.065.125	16.501.256	303.467	1.251.347	--	9.054
029	Malariology	3.449.063	3.310.318	29.602	108.105	--	1.038
039	Laboratory Services	390.091	379.594	5.962	4.535	--	--
T O T A L S		45.064.913	24.836.809	638.375	19.538.142	38.880	12.707

Source: Informe Complementario Constitucional, 1977. Ministerio de Hacienda, Dirección de Contabilidad Central, 1978.

APPENDIX C

APPENDIX C

Allocated versus Expended MOH Budgeted Monies

- Exhibit C-1: Total Appropriated vs. Expended Budgeted Monies Of The Decentralized Agencies, 1981-85**
- Exhibit C-2: Total Appropriated vs. Expended Budgeted Monies of the MOH Centralized Agencies, 1981-84 Operating Costs**
- Exhibit C-3: Total Appropriated vs. Expended Budgeted Monies of the MOH Capital Costs, 1981-85**
- Exhibit C-4: Total Appropriated vs. Expended Budgeted Monies for MOH Operating Expenses Derived from Investment Programs, 1981-85**
- Exhibit C-5: MOH Capital Expenditures: Allocations vs. Expenditures by MOH Program and Source of Financing, 1981-85**

EXHIBIT C-1
(Page 1 Of 2)

TOTAL OPERATING EXPENDITURES OF THE
AUTONOMOUS INSTITUTIONS AND OTHER ENTITIES, 1981-85
(In thousands of Colones)

FACILITY	1 9 8 1		1 9 8 2		1 9 8 3	
	APPRO- PRIATED	EXPENDED	APPRO- PRIATED	EXPENDED	APPRO- PRIATED	EXPENDED
Hospital Rosales, San Salvador	13.359.7	13.047.5	12.991.7	12.782.7	12.953.9	12.873.7
Hospital Benjamín Bloom, San Salvador	8.930.5	8.484.0	8.684.0	8.548.3	8.484.0	8.429.9
Hospital de Maternidad, San Salvador	7.065.3	6.978.2	7.053.4	6.948.6	7.067.4	6.643.4
Hospital Psiquiátrico, San Salvador	4.719.6	4.483.6	4.462.7	4.386.9	4.462.2	4.433.1
Hospital de Neumología, San Salvador	3.194.0	3.186.4	3.184.3	3.133.0	3.224.1	3.202.4
Hospital San Juan de Dios, Santa Ana	8.170.4	8.157.2	7.848.8	7.715.8	7.876.9	7.823.2
Hospital Francisco Menéndez, Ahuachapán	3.120.1	3.095.0	2.964.1	2.915.4	2.992.0	2.972.0
Hospital de Sonsonate	2.803.6	2.771.3	2.773.2	2.726.9	2.786.5	2.712.8
Hospital Dr. Luis Edmundo Vásquez, Chalatenango	2.337.0	2.315.9	2.220.2	2.184.3	2.220.2	2.206.2
Hospital San Rafael, Nueva San Salvador	3.228.4	3.067.0	3.117.0	3.065.4	3.067.0	3.046.0
Hospital Santa Gertrudis, San Vicente	3.117.6	3.117.6	2.831.3	2.783.9	2.872.6	2.853.4
Hospital Santa Teresa, Zacatecoluca	3.056.0	2.903.2	2.897.9	2.848.2	2.998.0	2.878.5
Hospital San Juan de Dios, San Miguel	4.545.6	4.476.1	4.254.4	4.182.5	4.282.1	4.253.1
Hospital San Pedro, Usulután	3.281.0	3.116.6	3.116.6	3.013.6	3.124.1	3.102.7
Cruz Roja Salvadoreña	321.8	287.7	287.7	279.5	287.7	285.0
Consejo Superior de Salud Pública	421.1	413.4	402.2	397.3	376.9	374.5
Instituto Salvadoreño de Rehabilitación de Inválidos	4.110.9	3.884.7	4.039.6	3.951.3	4.038.7	4.006.3
Hogar de Ancianos Narcisca Castillo	192.5	192.5	182.9	180.2	182.4	181.9
Other Entities	390.1	390.1	237.6	237.6		
T O T A L	76.364.9	74.356.1	73.549.8	72.277.5	73.392.2	72.513.0

Source: Informe Complementario Constitucional sobre la Hacienda Pública, 1981-1985,
Ministerio de Hacienda, 1982-1986.

EXHIBIT C-1
(Page 2 Of 2)

TOTAL OPERATING AND EXPENDITURES OF THE
AUTONOMOUS INSTITUTIONS AND OTHER ENTITIES, 1981-85
(In thousands of Colones)

FACILITY	1 9 8 4		1 9 8 5			
	GENERAL FUND		INTERNAL LOANS			
	APPRO- PRIATED	EXPENDED	APPRO- PRIATED	EXPENDED		
Hospital Rosales, San Salvador	12.691.7	12.691.7	1.682.4	1.682.4	15.015.8	15.015.8
Hospital Benjamín Bloom, San Salvador	8.484.0	8.484.0	746.4	746.4	9.839.3	9.839.3
Hospital de Maternidad, San Salvador	7.053.4	7.053.4	666.1	666.1	8.193.9	8.193.9
Hospital Psiquiátrico, San Salvador	4.462.7	4.462.7	466.7	466.7	5.293.4	5.293.4
Hospital de Neumología, San Salvador	3.034.4	3.034.4	488.1	488.1	3.582.2	3.582.2
Hospital San Juan de Dios, Santa Ana	7.761.8	7.761.8	891.5	891.5	9.237.6	9.237.6
Hospital Francisco Menéndez, Ahuachapán	2.964.1	2.964.1	303.7	303.7	3.596.0	3.596.0
Hospital de Sonsonate	2.658.3	2.658.3	412.2	412.2	3.173.5	3.173.5
Hospital Dr. Luis Edmundo Vásquez, Chalatenango	2.220.2	2.220.2	240.3	240.3	2.584.1	2.584.1
Hospital San Rafael, Nueva San Salvador	3.067.0	3.067.0	278.3	278.3	3.583.6	3.583.6
Hospital Santa Gertrudis, San Vicente	2.831.3	2.831.3	318.5	318.5	3.318.7	3.318.7
Hospital Santa Teresa, Zacatecoluca	2.898.0	2.898.0	315.0	315.0	3.414.1	3.414.1
Hospital San Juan de Dios, San Miguel	4.335.6	4.335.6	303.5	303.5	5.341.3	5.341.3
Hospital San Pedro, Usulután	3.116.6	3.116.6	307.1	307.1	3.705.8	3.705.8
Cruz Roja Salvadoreña	295.4	287.7	55.3	55.3	919.9	912.3
Consejo Superior de Salud Pública	396.3	396.3	36.2	36.2	456.0	456.0
Instituto Salvadoreño de Rehabilitación de Inválidos	4.039.7	4.039.7	406.6	406.6	5.010.9	5.010.9
Hogar de Ancianos Narcisca Castillo	182.9	182.9	21.1	21.1	217.7	217.7
Other Entities	227.5	227.5	0	0	444.3	444.3
T O T A L	72.723.0	72.715.4	7.939.0	7.939.0	86.928.0	86.920.4

Total Appropriated Total Expended
80.662.0 80.654.4

Source: Informe Complementario Constitucional sobre la Hacienda Pública, 1981-1985
Ministerio de Hacienda, 1982-1986.

EXHIBIT C-2

CURRENT OR OPERATING EXPENSES OF THE MINISTRY OF PUBLIC HEALTH
AND SOCIAL WELFARE
BY YEARS AND PROGRAMS 1981-1985
(Thousands of Colones)

PROGRAMS AND SUBPROGRAMS	1981		1982		1983		1984		1985	
	ALLOCATED	USED								
1.01 Top Management	920.5	885.2	525.7	520.3	634.8	614.8	690.7	677.0	702.0	698.8
1.02 General Adm. Services	28.902.8	23.593.9	26.121.4	25.975.7	20.841.7	20.227.5	19.587.5	19.496.3	16.588.0	16.560.4
019 Central Adm.	5.581.6	5.443.2	4.504.3	3.336.1	4.764.7	4.604.6	5.024.8	4.939.3	5.580.0	5.569.7
029 Department's Supply	23.321.2	18.150.7	21.617.1	21.629.6	16.077.0	16.623.0	14.562.6	14.557.6	11.008.0	10.990.7
1.03 Health Services Planning	2.303.9	2.217.8	2.142.4	2.123.2	2.135.2	2.049.7	2.291.4	2.230.9	2.208.9	2.783.4
1.04 Health Engineering	1.272.6	1.246.6	779.0	771.6	774.8	745.0	825.3	803.6	768.1	754.0
1.05 Normative Technical Services	1.689.0	1.639.9	1.335.2	1.319.4	1.351.7	1.279.4	1.417.7	1.400.8	1.415.8	1.415.6
1.06 Health Operative Services	48.906.3	48.244.4	47.392.1	46.825.5	46.691.5	46.085.1	52.490.8	52.024.9	55.391.0	55.302.8
019 Regional Health Services	43.598.4	43.083.0	42.220.7	41.329.2	41.522.8	41.053.2	46.269.5	46.207.9	49.825.9	49.743.9
029 Malariology	4.549.8	4.406.4	4.431.7	4.272.7	4.431.7	4.292.1	5.062.8	5.001.5	4.768.1	4.762.6
039 Laboratory Services	758.1	755.0	739.7	723.6	737.0	730.9	817.6	815.5	796.9	796.4
SUBTOTALS	83.994.6	77.827.8	78.296.6	77.535.4	72.619.6	71.002.4	77.303.1	76.534.3	77.673.8	77.525.0
Current Transfers	76.365.0	74.356.2	73.549.9	72.277.5	73.392.2	72.513.0	80.662.0	80.654.2	86.928.0	86.920.4
TOTALS	160.359.6	152.184.0	151.846.5	149.812.9	146.021.8	143.515.4	157.965.0	157.288.5	164.601.8	164.445.4

Source: Constitutional Complementary Report. Ministry of Finance. 1981-1985.

EXHIBIT C-3

**CAPITAL OR INVESTMENT EXPENSES. AMOUNTS ALLOCATED AND USED
BY YEARS AND PROGRAMS 1981-1985
(Thousands of Colones)**

PROGRAMS	1981		1982		1983		1984		1985	
	Allocated	Used	Allocated	Used	Allocated	Used	Allocated	Used	Allocated	Used
3.01 Enlargement of the Health Services Network	9.775.3	4.846.6	18.050.0	6.059.4	25.521.0	21.308.6	44.393.5	24.507.6	27.888.3	7.266.6
3.02 Const., Enlargement to Dept. Bldgs.	2.876.0	2.669.0	2.020.0	2.013.5	1.365.0	945.5	2.991.5	1.675	100.0	69.8
3.03 Rural Basic Sanitation	10.255.4	5.866.4	6.734.5	6.012.5	3.250.0	2.841.2	5.316.2	5.235	3.128.9	2.979.2
3.04 Latrization	600.0	221.2	400.0	317.7	350.0	346.4	403.0	401	448.0	434.6
3.05 Investment Programs Operation	894.1	963.2	1.165.0	1.120.3	1.215.0	1.139.0	1.356.8	1.315	1.366.0	1.327.0
3.06 Nutrition	528.9	375.4	330.4	330.4	300.4	300.0	530.0	350	0	0
4.01 Capital Transfers	2.683.3	0	0	0	0	0	0	0	0	0
T O T A L S	27.613.0	14.841.8	28.699.9	15.854.0	32.001.0	26.888.83	55.926.5	34.262	32.931.3	12.077.3

Source: Constitutional Complementary Report. Ministry of Finance. 1981-1985.

EXHIBIT C-4

**CURRENT OR OPERATING EXPENSES DERIVED FROM THE INVESTMENT PROGRAMS OF THE
MINISTRY OF PUBLIC HEALTH AND SOCIAL WELFARE 1981-1985**

(Thousand Colones)

TOTAL ALLOCATION PROGRAMS	1 9 8 1		1 9 8 2		1 9 8 3		1 9 8 4		1 9 8 5	
	ALLOCATED	USED	ALLOCATED	USED	ALLOCATED	USED	ALLOCATED	USED	ALLOCATED	USED
1.04 Health Engineering	1.272.6	1.246.6 (98.0%)	779.0	771.6 (99.1%)	774.8	745.0 (96.2%)	825.3	803.6 (97.4%)	768.1	764.0 (99.5%)
3.05 Investment Program Operation	894.1	863.2 (96.5%)	1.120.3	1.120.3 (100%)	1.215.0	1.139.0 (93.7%)	1.356.8	1.315.0 (96.9%)	1.366.0	1.327.1 (97.2%)
TOTAL	2.166.7	2.109.8 (97.4%)	1.944.0	1.989.8 (102.4%)	1.989.8	1.884.0 (94.7%)	2.182.1	2.118.6 (97.1%)	2.134.1	2.091.1 (98.0%)

Source: Constitutional Complementary Report 1981-1985. Ministry of Finance.

EXHIBIT C-5
Page 1 Of 5

CAPITAL OR INVESTMENT EXPENDITURES. AMOUNT ALLOCATED AND USED BY PROGRAMS AND
FINANCING SOURCES. MOH. 1981
(Colones)

PROGRAMS	A L L O C A T I O N S				U S E D			
	TOTALS	GENERAL FUND	DOMESTIC LOANS	FOREIGN LOANS	TOTALS	GENERAL FUND	DOMESTIC LOANS	FOREIGN LOANS
3.01 Enlargement of Health Services Network	9.575.257	--	5.175.257	4.600.000	4.846.510	--	4.745.560	101.000
3.02 Dept. Bldg. Constrct., Enlargement & Imprvmt.	2.876.025	--	2.876.025	--	2.668.960	--	2.668.960	--
3.03 Basic Rural Sanitation	10.255.370	--	4.502.490	5.752.880	5.866.437	--	1.896.357	3.970.08
3.04 Latrization	600.000	--	600.000	--	221.175	--	221.175	--
3.05 Investment Programs Operation	894.100	--	894.100	--	863.184	--	863.184	--
3.06 Nutrition	528.850	--	334.290	194.560	375.444	--	180.884	194.56
4.01 Capital Transfers	2.683.318	--	--	--	--	--	--	--
T O T A L S	24.929.602	--	14.382.162	10.547.440	14.641.760	--	10.576.120	4.265.64

Source: Constitutional Complementary Report, 1981. Ministry of Finance. 1982.

EXHIBIT C-5
Page 2 Of 5

CAPITAL OR INVESTMENT EXPENDITURES. AMOUNT ALLOCATED AND USED BY PROGRAMS AND
FINANCING SOURCES. MOH. 1982
(Colones)

PROGRAMS	ALLOCATIONS & EXPNS. BY SOURCE		A L L O C A T I O N S			U S E D			
	TOTALS		GENERAL FUND	DOMESTIC LOANS	FOREIGN LOANS	TOTALS	GENERAL FUND	DOMESTIC LOANS	FOREIGN LOANS
3.01 Enlargement of Health Services Network	18.050.000	--	5.550.000	12.500.000	6.059.412		3.580.412	2.478.000	
3.02 Dept. Bldg. Construct., Enlargement & Imprvmts.	2.020.000	--	2.020.000	--	2.013.513	--	2.013.513	--	
3.03 Basic Rural Sanitation	6.734.470	--	3.234.470	3.500.000	6.012.589	--	2.556.703	3.455.886	
3.04 Latrinization	400.000	--	400.000	--	317.750	--	317.750	--	
3.05 Investment Programs Operation	1.165.010	--	1.165.010	--	1.120.275	--	1.120.275	--	
3.06 Nutrition	330.440	--	300.000	30.440	330.440	--	300.000	30.440	
4.01 Capital Transfers	--	--	--	--	--	--	--	--	
T O T A L S	28.699.920	--	12.669.480	16.030.440	15.853.979	--	9.888.653	5.965.326	--

Source: Constitutional Complementary Report, 1982. Ministry of Finance. 1983.

EXHIBIT C-5
Page 3 Of 5

CAPITAL OR INVESTMENT EXPENDITURES. AMOUNT ALLOCATED AND USED BY PROGRAMS AND
FINANCING SOURCES. MOH. 1983
(Colones)

PROGRAMS	ALLOCATIONS & EXPNS. BY SOURCE								
	TOTALS	GENERAL FUND	DOMESTIC LOANS	FOREIGN LOANS	TOTALS	GENERAL FUND	DOMESTIC LOANS	FOREIGN LOANS	
3.01 Enlargement of Health Services Network	25.521.000	--	4.000.000	21.521.000	21.308.567	--	2.687.567	18.621.000	
3.02 Dept. Bldg. Construct., Enlargement & Imprvmts.	1.365.000	--	1.365.000	--	945.466	--	945.466	--	
3.03 Basic Rural Sanitation	3.250.000	--	3.250.000	--	2.841.156	--	2.841.156	--	
3.04 Latrinization	350.000	--	350.000	--	346.384	--	346.384	--	
3.05 Investment Programs Operation	1.215.000	--	1.215.000	--	1.139.008	--	1.139.008	--	
3.06 Nutrition	300.000	--	300.000	--	300.000	--	300.000	--	
4.01 Capital Transfers	--	--	--	--	--	--	--	--	
T O T A L S	32.031.000	--	10.480.000	21.521.000	26.880.581	--	8.259.581	18.621.000	

Source: Constitutional Complementary Repor, 1983. Ministry of Finance. 1984.

EXHIBIT C-5
Page 4 of 5

CAPITAL OR INVESTMENT EXPENDITURES. AMOUNT ALLOCATED AND USED BY PROGRAMS AND
FINANCING SOURCES. MOH. 1984
(Colones)

PROGRAMS	ALLOCATIONS & EXPNS. BY SOURCE								
	TOTALS	GENERAL FUND	DOMESTIC LOANS	FOREIGN LOANS	TOTALS	GENERAL FUND	DOMESTIC LOANS	FOREIGN LOANS	
3.01 Enlargement of Health Services Network	44.393.531	--	13.470.631	30.922.900	24.507.702	--	5.141.306	19.366.396	
3.02 Dept. Bldg. Construct., Enlargement & Imprvmts.	3.927.080	--	2.991.530	935.550	2.452.919	--	1.675.100	777.819	
3.03 Basic Rural Sanitation	5.315.175	--	3.656.845	1.659.330	5.235.098	--	3.591.584	1.643.514	
3.04 Latrization	403.000	--	403.000	--	401.355	--	401.355	--	
3.05 Investment Programs Operation	1.356.754	--	1.356.754	--	1.314.962	--	1.314.962	--	
3.06 Nutrition	530.000	--	530.000	--	350.658	--	350.658	--	
4.01 Capital Transfers	--	--	--	--	--	--	--	--	
T O T A L S	55.926.540	--	22.408.760	33.517.780	34.262.694	--	12.474.965	21.787.729	

Source: Constitutional Complementary Report, 1984. Ministry of Finance. 1985.

EXHIBIT C-5
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CAPITAL OR INVESTMENT EXPENDITURES. AMOUNT ALLOCATED AND USED BY PROGRAMS AND
FINANCING SOURCES. NOV. 1985
(Colons)

PROGRAMS	ALLOCATIONS & EXPNS. BY SOURCE								
	TOTALS	GENERAL FUND	DOMESTIC LOANS	FOREIGN LOANS	TOTALS	GENERAL FUND	DOMESTIC LOANS	FOREIGN LOANS	
3.01 Enlargement of Health Services Network	27.888.310	--	4.312.060	23.576.250	7.265.611	--	1.213.452	6.053.159	
3.02 Dept. Bldg. Construct., Enlargement & Imprvmts.	100.000	--	100.000	--	69.845	--	69.845	--	
3.03 Basic Rural Sanitation	3.128.920	--	3.128.920	--	2.979.188	--	2.979.188	--	
3.04 Latrization	447.980	--	447.980	--	434.585	--	434.585	--	
3.05 Investment Programs Operation	1.366.040	--	1.366.040	--	1.327.094	--	1.327.094	--	
T O T A L S	32.931.250	--	9.355.000	23.576.250	12.077.322	--	6.024.164	6.053.159	

Source: Constitutional Complementary Report, 1985. Ministry of Finance. 1986.

**APPENDIX D:
POSITIVE EXTERNALITIES**

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POSITIVE EXTERNALITIES

A positive externality exists whenever the benefits received from consuming a particular good are greater than those which are reaped by the individual who actually purchases and consumes the good or service. When this condition is met, something good (hence the adjective "positive") is reaped by someone who is not in the market; that is, by someone who is "external" to the market transaction--meaning he has not bought or sold the good or service.

An example of a positive externality is a vaccination. It not only does the individual who has to purchase it good because he avoids developing, for instance, measles, but it does his neighbors good too, because now one more possible transmission source of measles has been "eliminated". Societies as a whole choose to subsidize the purchase of goods with externalities--like vaccinations, because they benefit the entire community (society) as a whole, more than they benefit the single individual who might choose to purchase it for his own good (oblivious to or indifferent to the possibility that it might be beneficial to others). From society's vantage point because some who do not purchase the good with positive externalities will benefit from it, and because more of the community will benefit from it than will purchase it if the market is allowed to function on its own, it is in the interest of the society (as a whole) to encourage the production and consumption of such goods. Going back to our vaccination example, it is in society's best interest to have more vaccinations because society becomes less vulnerable to epidemics and their attendant disruptions (which can be very costly in terms of disrupted business and government schedules and the increased need for medical care).

APPENDIX E:
NOTES ON THE DRUG AND PHARMACEUTICAL INDUSTRY IN EL SALVADOR

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NOTES ON THE DRUG AND PHARMACEUTICAL INDUSTRY IN EL SALVADOR

The modern-day drug and pharmaceutical industry's origins date from the early days of the Central American Common Market (CAQM), the mid-1960s. Much of the industry consists of the importation of primary materials with only the "final touches" being added in the country. As such the value-added is relatively low. Nevertheless, relative to most of the other industries spawned by the CAQM, the drug industry was, and is, a big success (though to a lesser extent today)--it exports substantial volumes of drugs and pharmaceuticals not only throughout the CAQM (being its major supplier), but to Venezuela and Colombia, as well. The domestic industry has suffered both from the civil war in El Salvador, and from the disintegration of the CAQM. In the past year, it has reported a drop in exports of 25 percent. Concurrently there has been a 25 percent increase in imports.

Drug and pharmaceutical imports into El Salvador in 1984 totaled 152.5 million colones, or 6.2 percent of the total value of imports. Imports until January 1986 entered the country at the parallel rate of exchange. With the elimination of the parallel rate of exchange in January (one element of the "Paquete") the prices of imported drugs and pharmaceuticals have essentially doubled. This did not happen instantaneously, however. The Minister of Economy and the Ministry of Health have a commission which controls the prices of imported drugs. Foreign manufacturers who wish to market drugs or pharmaceuticals in El Salvador must submit a cost of production report. The commission reviews the report and establishes a maximum wholesale price markup of 25 percent above the manufacturer's claimed costs of production. The maximum retail price is the wholesale maximum plus another 25 percent of the cost of production. In an interview, Salvadoran economist, Eduardo Peña, who works for the U.S. State Department's Commercial/Economic Section reported that the only establishments in the entire country that sell imported drugs and pharmaceuticals at prices less than the legal maximums were a handful of very large drugstores located in downtown San Salvador. Following the elimination of the dual parallel exchange rate in January 1986, the Government froze drug and pharmaceutical prices for a two month period in order to be able to undertake the necessary studies to establish the new maximum price ceilings.

APPENDIX F

ISSUE: ALLOCATIVE EFFICIENCY

THE HOSPITALS VERSUS THE HEALTH CENTER, UNITS AND POSTS

APPENDIX F
(Page 1 Of 3)

ISSUE: ALLOCATIVE EFFICIENCY THE HOSPITALS VERSUS
THE HEALTH CENTERS, UNITS AND POSTS

Exhibit F-1 contains the regional health services expenditures for the centers, units and posts, as well as regional office staff (some of whom are located in the five regional offices, and some in the Central MOH Office in San Salvador) from 1981 to 1985. This figure consists of only the Ministerio de Salud Publica y Asistencia Social's budget program code 1.06, subprogram 019's Total Expenditures ("Total Utilizado") reported annually in "Estado I-4: Estado de Gastos por Clases Generales del Presupuesto General de (año), Resumen por Categoria de Programas, Unidades Primarias de Organizacion y Detalle por Programas", contained in the Ministerio de Hacienda's annual publication the Informe Complementario Constitucional. The exhibit also contains individual hospital expenditure data during these years. The individual hospital totals presented are their Total Expenditures ("Total Utilizado") listed under the MSPAS budget code 201, Current Transfers ("Transferencias Corrientes") in the same table referred to above (Estado I-4 of the Informe Complementario).

These, however, are not the full budgetary expenditures of either of these entities. Within the same table of the Informe Complementario is the MSPAS budget program 1.02 General Administrative Services ("Servicios Generales Administrativos"). This budget program contains two subprograms: the one which is of interest here is 029 Departmental Supplies of Materials and Equipment in General ("Suministros de Materiales y Equipo General del Ramo"). As its label suggests, the materials and supplies purchased with these monies are for the entire department or Ministry. It is divided among the MOH Central Office (Secretaría del Estado), the regional health services (i.e., the health centers, units, posts and the five regional offices), the hospitals and the other so-called "decentralized agencies".

According to the chief of the Financial Accounting Department of the MOH (who has held that position since 1979), approximately 75 percent of this fund goes to the hospitals. In an interview with the head of the MOH's Purchasing Department, however, it was maintained that since 1982 these monies have been allocated by a formula devised by the Operative Norms Division of the Ministry. The formula calls for allocating those funds which are not expended for Central Office supplies and materials (it was not determined how this sum is arrived at), to be divided between the hospitals on the

one hand, and the rest of the health care facilities on the other, in equal proportion to their share of total outpatient care visits provided (by physicians only) in the previous year.

FOOTNOTE: This allocation procedure establishes incentives for health service facilities to overreport the amount of ambulatory care they are providing. The magnitude of the potential distortion in utilization reported data (submitted to the Statistics Section of the MOH) this may have given rise to is obviously a function of the extent to which MOH service providers, and especially facility directors, are cognizant of this allocation process. Time constraints did not permit investigating the degree to which such distortions may have developed.

The numbers cited in the various reports I have reviewed which address this allocative efficiency related issue uniformly overlook this additional source of funds allocated to the hospitals. The picture they paint of the share of total MOH resources allocated to the regions and especially to the hospitals, therefore, is erroneous; it understates the proportionate share of the hospitals.

Absent the actual percentage splits of this additional pot of money (i.e., subprogram 029), to take a first crack at the "full" hospital share of the MOH purse, it is necessary to make an assumption about the magnitude of that split. Exhibit F-2 presents the proportion of the MOH budget expended for hospital services from 1979 to 1985 based on the assumption that the share of Departmental Materials and Supplies (budget subprogram 029) allocated to the fourteen hospitals is one half.

FOOTNOTE: Given that the share of hospitals in total ambulatory care provided by physicians has been about 40 percent during this period, and that if the pre-1982 hospital share of this fund was 75 percent, this is a reasonable first assumption.

Inclusive of these monies, the 14 hospitals on average together spend 56 percent of the MOH operations budget.

But this still is not the full picture. Hospitals also have access to monies from two additional sources. First, like the health centers (and less commonly the units and posts, as well)

FOOTNOTE: See team member N. Macpherson Chapin's report for a discussion of the frequency of patronatos by facility type.

the hospitals have health boards, or patronatos, which raise monies for them. The patronatos also "manage" funds obtained from "voluntary" contributions for health services provided at the particular health facility they "oversee". It is generally acknowledged that the receipts and expenditures of the hospitals' patronato funds are significantly larger than those of the other health establishments--both in the aggregate, as well as on a regional-specific basis.

Again, time constraints frustrated efforts to obtain an adequate account of the level of the patronato funds, and the changing levels of their funds and the uses of those funds over the last decade. The information about the amount of these monies which was obtained for hospitals is presented in Exhibit 52 of the text. That which was obtained for the other health facilities is presented in Exhibit 49, and consists of the regional aggregations of the sum of the funds of all of the health centers, units and posts.

The second additional source of funds which all MOH hospitals (with the exception of the Maternity Hospital) have is what is somewhat misleadingly referred to as simply "pensiones". Pensiones are a source of additional monies which are unique to hospitals and is limited to their inpatient care services. Exhibits 49-51 contain the revenues generated by the sale of pensiones and other goods and services by each of the hospitals in the 1982-84 era.

Pensiones funds consist of the revenues realized by the sale of exclusive, higher quality room and board (inpatient) services; general inpatient services, by contrast, are provided free of charge. Also associated with the pensiones are a set of established charges for the use of particular types of facilities (e.g., the operating room), equipment, and services. A new price structure for pensiones and pensiones-related goods and services was developed last fall, published in the December 23, 1985 edition of the Diario Oficial, and implemented beginning January 1, 1986. This was the first revision in these prices in ten years--since January 1976. Appendix E contains copies of the both of these decrees (including a itemized accounting of their price schedules) as they appeared in the Diario Oficial.

EXHIBIT F-1

**ACTUAL GENERAL BUDGET-FUNDED EXPENDITURES:
RELATIVE SHARES OF THE REGIONAL HEALTH
SERVICES AND THE HOSPITALS ***

(In Colones and relative share of their combined totals)

<u>YEAR</u>	<u>THE REGIONAL HEALTH SERVICES (CENTERS, UNITS, POSTS)</u>	<u>THE 14 HOSPITALS</u>
1981	42.082.981 (37.8%)	69.199.832 (62.2%)
1982	41.829.243 (38.4%)	67.229.136 (61.6%)
1983	41.063.162 (37.8%)	67.435.368 (62.2%)
1984	43.082.981 (38.4%)	69.200.031 (61.6%)
1985	49.743.885 (38.4%)	79.879.100 (61.6%)

* Regional Health Services Expenditures are the "total utilizado" reported in Budget Program Code 1.06.

"Servicios Operativos de Salud's" Budget Subprogram Code 019.

"Servicios Regionales de Salud" and hospitals' are the sum of Budget Code 201's 14 individual hospital "total utilizado" entries as reported in the annually published table "Estado de Gastos por Clases Generales del Presupuesto General de (año), Resumen por Categoría de Programas, Unidades Primarias de Organización y Detalle de Programas", of the Ministry of Hacienda's Informe Complementario Constitucional, Ejercicio Fiscal.

EXHIBIT F-2

**THE PROPORTION OF MOH GENERAL
BUDGET-FUNDED EXPENDITURES MADE BY THE 14 HOSPITALS***

<u>YEAR</u>	<u>TOTAL MOH OPERATIONS EXPENDITURES</u>	<u>TOTAL HOSPITAL EXPENDITURES</u>
1979	123.168.952	70.395.374 (57.2%)
1980	147.491.090	82.962.301 (56.2%)
1981	152.184.161	83.431.628 (54.8%)
1982	149.823.095	83.042.297 (55.4%)
1983	143.515.369	80.324.454 (56.0%)
1984	157.288.512	87.933.232 (55.9%)
1985	164.445.381	92.415.713 (56.2%)
1986 (Initial allocation)		95.400.995 (55.8%)

* As detailed in the text Total Hospital Expenditures are the sum of their total transfers received from the MoH plus half of Budget Program Code 1.02 General Administrative Services' Subprogram 029 Departmental Supplies of Materials and Equipment.

Source: Informe Complementario Constitucional, various years.

APPENDIX G
GOVERNMENT DECREES ESTABLISHING
PENSIONES PRICE LEVELS

Dominación	Rubro Arancelario (NAUCA)
MAQUINARIA Y EQUIPO	
Exoneración del 100% por clasificación y 40% por el Impuesto de Estabilización Económica	
Equipos de refrigeración para la conservación de embutidos y carnes	716—12—02—02
Máquinas para el amarre de embutidos	719—13—08
Charolas y recipientes de plástico para carnes y embutidos	698—13—02
Sierras eléctricas para carnicería, repuestos y accesorios	721—12—04

59.—El goce de los anteriores beneficios queda sujeto al cumplimiento de las obligaciones que impone el citado Convenio y su Reglamento, y especialmente a las siguientes:

a) La actividad industrial a que se refiere este Acuerdo deberá realizarse de conformidad a lo expuesto en la solicitud, en el estudio técnico económico y demás documentos presentados; las modificaciones en los planes y proyectos iniciales que se realicen, deberán comunicarse al Ministerio de Economía dentro de los 30 días calendario subsiguientes a la fecha en que ocurran y si fueren sustanciales podrán motivar la reforma o derogación de este Acuerdo;

b) La Sociedad beneficiaria deberá comunicar por escrito inmediatamente al Ministerio de Economía el inicio de su producción en escala industrial, a efecto de no autorizar franquicia a productos que deseen importarse y que elabore la empresa en condiciones adecuadas;

c) Proporcionar a las autoridades competentes los datos e informes que le soliciten para ejercer el régimen de control que establece el Convenio;

d) Llevar en libros y registros especiales, que estarán sujetos a inspección de parte de las autoridades administrativas y fiscales, información detallada de las mercancías que se importen con franquicia aduanera al amparo de este Acuerdo, así como del uso y destino que se dé a dichas mercancías;

e) Adiestrar o cooperar para su adiestramiento durante la vigencia de este Acuerdo mano de obra y técnicos nacionales suficientes para el desempeño, dentro de la misma empresa, de los puestos administrativos y directivos que se requieran para la adecuada fabricación y distribución de los productos;

f) Observar las disposiciones legales y sus reglamentos sobre normas de calidad, peso y medidas vigentes; y

g) La empresa deberá llevar registros especiales y por separado para cada una de las actividades objeto de los beneficios fiscales otorgados;

60.—De conformidad con los Artículos 33 del Convenio y 49 de su Reglamento, deberá expresarse por escrito la aceptación de los presentes beneficios, dentro de un periodo de 10 días, hábiles, contados desde el siguiente al de la notificación respectiva;

70.—El presente Acuerdo podrá ser modificado o dejado sin efecto si fuere necesario, para dar cumplimiento a algún Convenio o Protocolo que establezca un nuevo Régimen Uniforme de Incentivos Fiscales al Desarrollo Industrial de Centroamérica;

80.—El presente Acuerdo entrará en vigencia el día de su publicación en el Diario Oficial. Transcribese a la SIECA.—Comuníquese. (Rubricado por el señor Presidente de la República). El Ministro de Economía, GONZALEZ CAMACHO. —El Ministro de Hacienda, LOPEZ.

MINISTERIO DE SALUD PÚBLICA Y ASISTENCIA SOCIAL

DECRETO Nº 87.

EL ÓRGANO EJECUTIVO DE LA REPUBLICA DE EL SALVADOR,

CONSIDERANDO:

I.—Que los costos actuales de operación y mantenimiento de los Servicios de Salud, ha sufrido un incremento considerable en todos los rubros.

II.—Que la demanda de asistencia médica de los servicios de salud, se ha incrementado conforme al crecimiento de la población y las condiciones económicas, políticas y sociales.

III.—Que los presupuestos de funcionamiento de los Servicios de Salud del Ministerio de Salud Pública y Asistencia Social, lejos de ser incrementados conforme a su demanda y los costos antes mencionados, han sufrido un decremento en su asignación anual.

IV.—Por las razones expuestas, los Servicios de Salud operan con pérdidas en la prestación de servicio de pensionado.

POR TANTO,

en uso de sus facultades legales y en Consejo de Ministros celebrado el 14 de agosto de corriente año,

DECRETA:

- Derógase el Acuerdo Ejecutivo Nº 2408 de fecha 8 de septiembre de 1976, publicado en el Diario Oficial Nº 174, Tomo 252 de fecha 22 del mismo mes y año.
- Modifícase el Instructivo Nº 1-070 del 15 de abril de 1975, emitido por el Ministerio de Hacienda y la Corte de Cuentas de la República, en el literal c) del romano I, en el sentido de que todos los ingresos percibidos por Servicios de Pensionado, pasarán a formar parte del fondo de actividades especiales.
- Establecer las tarifas generales para los distintos servicios de pensionados de los establecimientos de Salud, dependientes de Ministerio de Salud Pública y Asistencia Social, así:

PENSIONADOS

Pensión Especial, cuota diaria por enfermo	C 50.00
Pensión General, cuota diario por enfermo	20.00
En Hospitales de Neumología y Psiquiatría:	
Pensión General, cuota diaria por enfermo	25.00
En Hospital Benjamin Bloom:	
Pensión Especial, cuota diaria por enfermo	40.00
Pensión General, cuota diaria por enfermo	25.00
En cualquier establecimiento por alimentación de un acompañante y o	197

Almuerzo o cena c/u. C 6.00

Cama para acompañante, cuota diaria. 10.00

Para ingresar al servicio de pensionado especial, hay que hacer previamente un depósito en efectivo de C 250.00 y de C 150.00 para pensionado general. El depósito se renovará cada 8 días o antes cuando el valor de los servicios proporcionados haya agotado la suma depositada.

SALA DE OPERACIONES

Cirugía Mayor, por cada operación 60.00

Cirugía Menor, por cada operación 40.00

Estos precios, únicamente cubren derecho de sala, ropa esterilizada y uso de aparatos e instrumentos; no incluye antiséptico, gasa, torundas, algodón, hilos para suturas, vendajes, anestésicos, guantes y medicinas, ni transfusiones que se usen durante la intervención quirúrgica, todo lo cual se cobrará, de acuerdo al consumo y al precio de costo más un recargo del 50%.

Los servicios del anestesiólogo y del transfusionista, así como la sangre serán contratados y pagados por los interesados.

ASISTENCIA DE PARTO

Por el uso de la sala de partos e instrumental quirúrgico por cada parto. Este precio, únicamente cubre derecho de sala, ropa esterilizada, y uso de aparatos e instrumentos; no incluye antisépticos, gasa, torundas, algodón, hilos para suturas, vendajes, anestésicos, guantes y medicinas, ni transfusiones que se usen durante la intervención quirúrgica, todo lo cual se cobrará de acuerdo al consumo y al precio de costo más un recargo del 50%.

Los servicios del anestesiólogo serán contratados y pagados por los interesados.

TRANSFUSIONES SANGUINEAS

Por cada transfusión 25.00

Este precio incluye el uso del equipo y materiales

La sangre y el transfusionista serán contratados y pagados por los interesados.

OXIGENOTERAPIA

Cuota diaria por el uso de una tienda de oxígeno 15.00

Cuota diaria por el uso de una incubadora 15.00

Estas cuotas no incluyen el oxígeno, el cual se cobrará por cilindro o libras según el caso, al precio vigente en plaza más un recargo del 50%.

Gasometría 40.00

MEDICINAS Y OTROS ARTICULOS

Las medicinas y otros artículos que el abastecedor proporciona a los pa-

LABORATORIO CLINICO

Adenograma	C 40.00
Anticuerpos Antiplaquetarios	50.00
Antígeno Hepatitis B (Ag. Australiano)	40.00
Aglutinación en Frio	20.00
Aglutinación por Anticuerpos Heterófilos	25.00
Albumina en Orina	10.00
Antígeno Febril	20.00
Bacteriológico de Heces (Coprecultivo y Antibiograma)	30.00
Bacteriológico de Urina (Urocultivo y Antibiograma)	30.00
Capacidad de Fijación de Hierro	25.00
Células de Lupus Eritematoso	35.00
Concentrado de Strout para Chagas	75.00
Cultivos con Antibiograma	25.00
Cuali-Cuantitativa (Hemograma Completo)	15.00
Cultivo de amibas	25.00
Calcio-Fósforo	10.00
Dehidrogenasa de Acido Láctico (D.H.L.)	30.00
Depuración de Creatinina Endógena	40.00
Directo de Bacterias Acido Resistente (B.A.R.)	10.00
Directo de Bacterias no Acido Resistente (No Bar)	10.00
Dilución y concentración en Orina	20.00
Dosificación de Acido Úrico en Sangre	15.00
Dosificación de Amilasa	20.00
Dosificación de Barbitúricos	80.00
Dosificación de Bilirrubina	15.00
Dosificación de Calcio en Sangre	15.00
Dosificación de Cloruro en Sangre	15.00
Dosificación de Colesterol en Sangre	15.00
Dosificación de Creatin Fosfoquinasa	12.00
Dosificación de Creatinina	15.00
Dosificación de Fibrinógeno	25.00
Dosificación de fosfatasa Acida	20.00
Dosificación de Fosfatasa Alcalina	20.00
Dosificación de Fósforos en Sangre	15.00
Dosificación de Glucosa en Sangre	12.00
Dosificación de Inmuglobulinas	125.00
Dosificación de Lipasa	10.00
Dosificación de N.N.P. en Sangre	12.00
Dosificación de Proteínas (Biuret)	20.00
Dosificación de Proteínas (Electroforesis)	60.00
Dosificación de Reserva Alcalina	20.00
Dosificación 17 Ketosteroides	60.00
Dosificación de Urobilinógeno en Heces	20.00
Dosificación de Urobilinógeno en Orina	20.00
Dosificación de Urea en Sangre	15.00
Electrolitos (Cl-Na-K)	15.00
Eritrosedimentación	10.00
Espemograma	30.00
Espudo (Koch) directo	15.00
Estudio Citológico Secreción Prostática	12.00
Examen General de Heces	10.00
Examen General de Orina	10.00
Fluorescencia para treponema Pálido (FTA. abs.)	40.00
Grasas de 24 horas en Heces	30.00
Gastroscopia	15.00
Gota Gruesa (Hematozoario o Plasmodium)	10.00
Grupo Sanguíneo y Rh Banco de Sangre)	12.00
Hematócrito	8.00
Hemocultivo	30.00
Hemoglobina	8.00
Hematócrito y Hemoglobina	10.00
Hierro Sérico	25.00
Investigación de Anticuerpos Aglutinantes	35.00
Inmunofluorescencia Salmonella Typhi en Heces	25.00
Kariotipo	125.00
Leucograma	

Lipoproteínas por Electroforosis	50.00	Tórax Ap.	30.00
Líquido Ascítico (Cito-Químico)	40.00	Abdomen Simple	30.00
Líquidos: Articular (Cito-Químico)	40.00	Abdomen Agudo (tres placas)	50.00
Líquido Céfalo Raquídeo	30.00	Pielograma I.V.	65.00
Líquido: pleural (Cito-Químico)	40.00	Pielograma Retrogrado	75.00
Mielograma	70.00	Cistograma	75.00
Magnesio (Bicarbonato)	10.00	Uretrograma	75.00
Nitrógeno uréico	15.00	Amiografía Bilateral (Mastografía)	60.00
Perfirina en Orina de 24 horas (PBG-Copro y Uroperfirina ALA)	80.00	Anticuerpos Antinucleares	80.00
Proteína C Reactiva	25.00	Enema Baritado	70.00
Proteína de Bence Jones en Orina	15.00	Sialografía	50.00
Prueba de Bromo fenolsulfataleína	30.00	Pelvimetría	50.00
Prueba de concentración-Dilución	15.00	Esófago, Estómago y Duodeno	60.00
Prueba de Coombs	25.00	Intestino Delgado	60.00
Prueba Cruzada	30.00	Colon	60.00
Prueba de Depuración Uréica	30.00	Colescistografía Oral	50.00
Prueba de Embarazo	15.00	Colescistografía I.V.	60.00
Prueba de Fenulsulfataleína	20.00	Colangiograma Operatorio	50.00
Prueba de Hauger	15.00	Colangiograma Post-Operatorio (Colangiograma Tubo T)	50.00
Prueba de Látex	15.00	Colangiograma Percutáneo Transh	50.00
Prueba de Lazo	12.00	Pancreatografía	100.00
Prueba de Resistencia Globular	15.00	Arteriografía de Miembro S.E. Inf.	100.00
Prueba Dérmica de Histoplasmina	25.00	Venografía de Miembros S.E. Inf.	100.00
Prueba de Timel	15.00	Aortografía	150.00
Prueba de Tolerancia a la Glucosa (Exton-Rose)	40.00	Cavografía	150.00
Prueba de Tolerancia a la Glucosa (Standard)	50.00	Linfangiografía	200.00
Punción Médula Osea	60.00	Arteriografía Cerebral	100.00
Recuento de Eosinófilos	10.00	Ventriculografía	100.00
Recuento de Plaquetas	10.00	Neumoencefalografía	150.00
Reacción de Paul-Bunell	20.00	Mielografía	150.00
Reticulocitos	8.00	Arteriografía Arco Aórtico	150.00
Sangre oculta	8.00	Arteriografía Selectiva Visceral	150.00
Sangre Periférica (Anormalidades de Leucocitos)	12.00	Cineangiocardiógrafa	175.00
Tiempo de Protrombina	15.00	Angiocardiografía	175.00
T.P.P. Activada	25.00	Espienoportograma	175.00
Tiempo de Sangramiento y Coagulación.	15.00	Broncograma	75.00
Título de Antiestreptolisina	25.00	Laringograma	75.00
Transaminasas	20.00	Tomograma (por sección)	30.00
Triglicéridas	30.00	Retroneumoperitoneo	100.00
Tubaje Duedenal	40.00	Carboangiografía	100.00
Tubaje Gástrico (Químico)	30.00	Rectoscopia	10.00
V.D.R.L.	15.00	Esofagograma	50.00

RADIOLOGIA

Dentaria por Placa	5.00
Oclusiva Dentaria	10.00
Mano Ap. y Lat.	25.00
Muñeca Ap. y Lat.	25.00
Brazo Ap. y Lat.	25.00
Antebrazo Ap. y Lat.	25.00
Codo Ap. y Lat.	25.00
Húmero Ap. y Lat.	25.00
Hombro Ap.	30.00
Clavícula Ap.	25.00
Cadera Ap.	40.00
Pelvis Ap.	40.00
Fémur Ap. y Lat.	30.00
Rodilla Ap. y Lat.	25.00
Pierna Ap. y Lat.	25.00
Tobillo Ap. y Lat.	25.00
Pie Ap. y Lat.	20.00
Cráneo Ap. Lat. Occipital	45.00
C. Cervical Ap. y Lat.	40.00
C. Dorsal Ap. y Lat.	40.00
C. Lumbar Ap. y Lat. y Spots SI (Lumbo-Sacra)	45.00
Sacrocoxis Ap. y Lat.	45.00
Externón Ap. y Lat.	40.00
Costilla Ap.	30.00
Mastoides 2 Vistas Bilaterales	50.00
Senos Paranasales	40.00
Agujeros Ópticos	45.00
Cara Wter y Lat.	40.00
Maxilar Inferior Pa. Oblicuas	30.00
Huesos Nasales	30.00
Articulación Temporamaxilar	40.00

RADIOTERAPIA

Aplicaciones Superficiales, por cada área.	8.00
Terapia Convencional, aplicación de 400 Rads. c/u	10.00
Aplicaciones de Cobalto, 400 Rads. c/u.	10.00
Por cada aplicación de Radium (60 mg x 100 horas)	125.00
No incluye derecho a Sala de Operaciones ni anestesia, ni transfusiones, ni pensionado.	
Luminoterapia	6.00
Fototerapia	10.00

MEDICINA NUCLEAR

Captación de I-131 a las 2 h. y las 24 h. T3, T4, ó E.T.R. (índice de Tiroxina Libre) c/u	40.00
Centellograma de Tiroides	50.00
Volumen Sanguíneo y Plasmático	40.00
Determinación de la Masa Celular Roja.	50.00
Supervivencia Globular con Cromiuu 51.	75.00
Estudio de la Regeneración de los Glóbulos Rojos	75.00
Prueba de Schilling (anemia perniciosa con Cobalto 60)	75.00
Centellograma Hepatoesplénico (hepático)	175.00
Centellograma Cerebral	175.00
Centellograma Renal	175.00
Centellograma Pulmonar	175.00
Centellograma del Paratiroides	125.00
Centellograma Cardíaco	175.00

Centellograma de Páncreas	¢ 225.00
Hormonas Hipofisarias (TSH-LIFSH-Gonadotropina)	100.00
Renograma Isotópico	125.00
Placentografía	80.00
Centellograma Oseo	175.00
Estudio de (hierro 59) en el Plasma y Glóbulos Rojos)	75.00
Prueba de insuficiencia Pancreática y Mal Absorción Intestinal	100.00
Rastreo Corporal	175.00
Hipertiroidismo	225.00
Ca. del Tiroides con 1.131	400.00

HEMODIALISIS

Por cada sesión de hemodiálisis	75.00
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Este precio solamente incluye el servicio del técnico y el uso del aparato de hemodiálisis. Todos los materiales necesarios corren a cuenta del interesado. Se cobrarán al costo, más un recargo del 50%.

CARDIOLOGIA

Por cada Electrocardiograma	30.00
Por cada Fonocardiograma	90.00
Por cada Angiocardiograma	175.00
Por cada Prueba de Esfuerzo	80.00
Por cada Cateterismo Intracardiaco con cine	700.00
Por cada Cateterismo Intracardiaco sin cine	300.00
Por cada Cardioversión	125.00

NEUMOLOGIA

Broncoscopia (rigido)	75.00
Fibrosocopia (flexible)	100.00
Fibrobroncoscopia	100.00
Broncograma	150.00
Pneuroscopia	135.00

Este precio incluye: El uso de la Sala y del aparato. Los materiales necesarios se cobrarán al costo más el 50% del recargo.

Prueba de la Función Pulmonar	65.00
Alquiler aparato de Bennet	15.00

ELECTRODIAGNOSTICO

Electroencefalograma	75.00
Ecoencefalograma	75.00
Audiometria Simple, Adaptación y Recutamiento SISI	20.00
Nistagmografía	125.00
Impedanciometria	25.00
Estilmanometria Nasal	25.00

ANATOMIA PATOLOGICA

Biopsias cualquier órgano	75.00
Biopsia de congelación	50.00
Estudio de Piezas Operatorias Medianas.	50.00
Estudio de Piezas Operatorias Grandes.	75.00
Autopsias sin Fines Médicos-legales adulto	000.00
Autopsias sin Fines Médicos-legales niños	500.00
Embalsamamiento de un Cadáver, por Simple Inyección	300.00
Embalsamamiento de un Cadáver, con Evisceración	500.00
Citología Exfoliativa en general	20.00

FISIOTERAPIA

Mecanoterapia, cada sesión	8.00
Corrientes Galvánicas, cada sesión	8.00
Corriente Alternativas de Baja Frecuencia, cada sesión	8.00
Corriente Sinusoidales, cada sesión	8.00
Corriente de Alta Frecuencia, cada sesión	8.00

Ultravioleta, cada sesión	8.00
Infrarrojos, cada sesión	8.00
Indutotermia, cada sesión	8.00

ODONTOLOGIA

Consulta	5.00
Extracciones	10.00
Profilaxis Dental	25.00
Obturaciones de Amalgama de Plata (Simple)	30.00
Obturaciones de Amalgama de Plata (Complejas)	40.00
Obturaciones de Silicato	25.00
Obturaciones de Compósitos	40.00
Tratamiento Periodontal Simple (De-tartraje)	30.00
Tratamiento Periodontal Complejo (Curetaje)	50.00

DISPOSICIONES GENERALES

Servicio de Pensionado

- 1.—Los Servicios Nacionales de Salud del Ministerio de Salud Pública que disponga de instalaciones adecuadas proporcionarán Asistencia médica en Pensionados Especiales y Generales.
- 2.—El Ministerio de Salud Pública determinará los locales y su número, que puedan dar servicio de Pensionado Especial y Pensionado General en cada establecimiento de acuerdo con sus instalaciones y recursos.
- 3.—Todos los médicos que tengan nombramiento como miembro del Cuerpo Médico Activo, Cuerpo Médico Consultivo, Cuerpo Médico de Cortesía y Cuerpo Médico Honorario de los Hospitales y Centro de Salud (Artículos Nos. 41 y 74 del Reglamento General de Hospitales del Ministerio de Salud Pública y Asistencia Social), podrán atender a sus pacientes privados en el servicio de pensión, excepto los miembros del Cuerpo Médico Residente que por la naturaleza de sus cargos, estén inhabilitados de ejercer la profesión en forma privada (Art. 49 del Reglamento arriba citado y los que por faltas cometidas en el ejercicio de su profesión hayan sido suspendidos como tales).
Todos los Odontólogos que tengan nombramiento como miembros facultativos de los hospitales y centros de salud, podrán atender a sus pacientes privados en el servicio de pensión, excepto los miembros facultativos que por faltas cometidas en el ejercicio de su profesión hayan sido suspendidos como tales.

- 4.—Todo paciente de pensión tendrá su médico privado. Los asistentes de residentes, médicos residentes o Jefes de residentes atenderán a los pacientes del servicio de pensionado únicamente en casos de urgencia y sin remuneración, para mientras llega su médico privado.
- 5.—Los profesionales especialistas que practiquen los exámenes, estudios, aplicaciones e interpretaciones que figuren en las secciones de **RADIOTERAPIA, MEDICINA NUCLEAR, CARDIOLOGIA, NEUMOLOGIA, ELECTRODIAGNOSTICO, ANATOMIA, PATOLOGIA, ODONTOLOGIA Y RADIOLOGIA**, cobrarán como honorarios profesionales el 40% de esta tarifa.

El servicio de pensionado consistirá básicamente en: alojamiento, servicios generales de enfermería, alimentación a los pacientes y ropa de cama.

- 7.—Para los efectos de aplicación de tarifas, el día en los hospitales y centros de salud se computará desde las doce horas y cualquier fracción mayor de doce horas se contará como un día.
- 8.—Al efectuar la liquidación de la cuenta, se devolverá al interesado el excedente del dinero dejado en depósito.
- 9.—Se permite la permanencia de un acompañante y la contratación por cuenta del paciente de una enfermera especial, sin derecho a cama y alimentación que serán pagadas según estas tarifas.

SALA DE OPERACIONES

- 10.—Para los efectos de esta Reglamentación se establecen las siguientes definiciones: Cirugía Mayor: se considera como cirugía mayor aquella en la que el paciente es sometido a un tratamiento cruento que supone riesgo para su vida y que requiere habitualmente atención post-operatoria. En estos casos con frecuencia se penetra en las grandes cavidades del organismo (cráneo, tórax o abdomen); se extirpan órganos, se corrigen lesiones o defectos o se interviene sobre miembros o parte de los mismos (amputaciones, resecciones, correcciones o reparaciones).

Cirugía Menor: Se considera cirugía menor, aquella en la que el paciente es sometido a un tratamiento cruento que no implica un riesgo importante para su vida, y que habitualmente no requiere internación posterior, salvo razones ajenas a la operación, (residencia rural, necesidad de curaciones repetidas, etc.). Ejemplo de cirugía menor: abertura y drenaje de abscesos, extirpaciones de lipomas o quistes superficiales, suturas de la piel y tejido celular, aplicación de neumotórax, punciones raquídeas, pleurales o abdominales, endoscopias y extracción de cuerpos extraños.

- 11.—Los pacientes sometidos a tratamientos quirúrgicos en las salas del hospital o centro de salud, que posteriormente sean trasladados a los pensionados, pagarán los derechos de sala de operaciones conforme la disposición anterior.

O T R O S

- 12.—El personal que trabaje en el Ministerio de Salud Pública y Asistencia Social y en todas sus dependencias, gozarán de la asistencia médica hospitalaria, conforme lo regulan las Disposiciones Generales de Presupuestos, con un descuento del cincuenta por ciento de estas tarifas.
- 13.—Quedan derogadas todas las tarifas anteriores de los establecimientos dependientes del Ministerio de Salud Pública y Asistencia Social y aquellas regulaciones que se opongan a la presente.
- 14.—El presente Decreto entrará en vigencia ocho días después de su publicación en el Diario Oficial.

DADO EN CASA PRESIDENCIAL: San Salvador, a los nueve días del mes de diciembre de mil novecientos ochenta y cinco.

JOSE NAPOLEON DUARTE,

Presidente Constitucional de la República

Benjamin Valdez h..

INSTITUCIONES AUTONOMAS

CORTE DE CUENTAS DE LA REPUBLICA

Acuerdo Nº 269.—Presidencia de la Corte de Cuentas de la República: San Salvador octubre de 1985.

El Presidente de la Institución, en las facultades que le confiere el Artículo 1º de la Ley Orgánica de la Corte de Cuentas de la República y el Artículo 82 literal d) Ley de Tesorería, ACUERDA: Designar a partir del día dos de septiembre interinamente dos meses, Interventor de Mandamientos Definitivos de Gastos Periódicos, de la Dirección General de Estadística y Censos, a la señora Irma Yolanda Alvarenga de Alvarenga, quien desempeña el cargo de Oficial de 4ª Clase, Partida 21, Subnúmero 13, en sustitución de la señora Margarita García de Urrutia, que se encuentra con licencia. Comuníquese. B. W. NAVARRETE.

Acuerdo Nº 270.—Presidencia de la Corte de Cuentas de la República: San Salvador octubre de 1985.

El Presidente de la Institución, en las facultades que le confiere el Artículo 1º de la Ley Orgánica de la Corte de Cuentas de la República y el Artículo 82 literal d) Ley de Tesorería, ACUERDA: Designar a partir de uno del presente mes, Interventor de Mandamientos Definitivos de Gastos Periódicos de la Dirección General de Educación Física, Deportes a la Profesora Ana María Colacho, desempeña el cargo de Asesor Docente, Partida en sustitución del señor Manuel de Jesús Muñiz. Comuníquese. B. W. NAVARRETE.

Acuerdo Nº 271.—Presidencia de la Corte de Cuentas de la República: San Salvador octubre de 1985.

El Presidente de la Institución, en las facultades que le confiere el Artículo 1º de la Ley Orgánica de la Corte de Cuentas de la República y el Artículo 82 literal d) Ley de Tesorería, ACUERDA: Designar a partir del 21 de septiembre al 31 de diciembre del presente año interinamente, Interventor de Mandamientos Definitivos de Gastos Periódicos Juzgado Segundo de Hacienda a la señora Cecilia Donis de Martínez, quien desempeña el cargo de Oficial de 4ª Clase, Partida 35, Subnúmero 20, del Programa 103—020, en sustitución de la señora María Elizabeth Vidaurre Muñoz que se encuentra con licencia. Comuníquese. B. W. NAVARRETE.

Acuerdo Nº 272.—Presidencia de la Corte de Cuentas de la República: San Salvador octubre de 1985.

El Presidente de la Institución, en las facultades que le confiere el Artículo 1º de la Ley Orgánica de la Corte de Cuentas de la República y el Artículo 82 literal d) Ley de Tesorería, ACUERDA: Designar a partir del día 21 de septiembre al 19 de diciembre del presente año interinamente, Interventor de Mandamientos Definitivos de Gastos Periódicos Juzgado Séptimo de lo Penal de San Salvador a la señora Amada Libertad Infantozzi quien desempeña el cargo de Oficial de 4ª Clase, Partida 35, Subnúmero 121, en sustitución de la señora Margarita Yolanda López de Ange...

**MINISTERIO DE SALUD PUBLICA
Y ASISTENCIA SOCIAL.**

ANEXO No. 2

**RAMO DE SALUD PUBLICA
Y ASISTENCIA SOCIAL**

Acuerdo N° 2408.

San Salvador, 8 de septiembre de 1970.

El Poder Ejecutivo ACUERDA: aprobar las tarifas generales para los distintos servicios de los Establecimientos de Salud dependientes del Ministerio de Salud Publica y Asistencia Social, así:

PENSIONADOS

	Colonias
Pensión Especial, cuota diaria por enfermo	25.00
Pensión General, cuota diaria por enfermo	12.00
En Hospitales de Neumología y Psiquiatría:	
Pensión General, cuota diaria por enfermo	10.00
En Hospital Benjamin Bloom:	
Pensión Especial, cuota diaria por enfermo	30.00
Pensión General, cuota diaria por enfermo	15.00
En cualquier establecimiento por alimentación de un acompañante y/o enfermera:	
Desayuno c/u	2.00
Almuerzo o cena c/u.	3.00
Cama para acompañante, cuota diaria.	5.00
Para ingresar al servicio de pensionado especial, hay que hacer previamente un depósito en efectivo de C 250.00 y de C 150.00 para pensionado general.	
El depósito se renovará cada 8 días o quince cuando el valor de los servicios proporcionados haya agotado la suma depositada.	

SALA DE OPERACIONES

Cirugía Mayor, por cada operación	40.00
Cirugía Menor, por cada operación	20.00
Estos precios, únicamente cubren derecho de sala, ropa esterilizada y uso de aparatos e instrumentos; no incluye antisépticos, gasa, torundas, algodón, hilos para suturas, vendajes, anestésicos, guantes y medicinas, ni transfusiones que se usen durante la intervención quirúrgica, todo lo cual se cobrará, de acuerdo al consumo y al precio de costo más un recargo del 50%	

Los servicios del anestesiólogo y del transfusionista, así como la sangre serán contratados y pagados por los interesados.

ASISTENCIA DE PARTOS

Por el uso de la sala de partos e instrumental quirúrgico por cada parto	20.00
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Este precio, únicamente cubre derecho de sala, ropa esterilizada y uso de aparatos e instrumentos; no incluye antisépticos, gasa, torundas, algodón, hilos para suturas, vendajes, anestésicos, guantes y medicinas, ni transfusiones que se usen durante la intervención quirúrgica, todo lo cual se cobrará de acuerdo al consumo y al precio de costo más un recargo del 50%.

Los servicios del anestesiólogo serán contratados y pagados por los interesados.

TRANSFUSIONES SANGUINEAS

Por cada transfusión	15.00
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Este precio incluye el uso del equipo y materiales

La sangre y el transfusionista serán contratados y pagados por los interesados.

OXIGENOTERAPIA

Cuota diaria por el uso de una tienda de oxígeno	8.00
Cuota diaria por el uso de una incubadora	10.00
Estas cuotas no incluyen el oxígeno, el cual se cobrará, por cilindro o libras según el caso, al precio vigente en plaza más un recargo del 50%.	
Gasometria	30.00

MEDICINAS Y OTROS ARTICULOS

Las medicinas y otros artículos que el establecimiento proporcione a los pacientes en los procedimientos, se cobrarán al costo, más un recargo del 50%.

LABORATORIO CLINICO

Adenograma	40.00
Antibograma para No Acido Resistente.	50.00
Aglutinación en Frio	10.00
Aglutinación por Cuerpos Heterófilos ...	15.00
Albumina en Orina	4.00
Antígeno Febril	10.00
Bacteriología de Heces (Cuprocultivo y Antibograma)	20.00
Bacteriología de Orina (Urocultivo y Antibiograma)	20.00
Capacidad de Fijación de Hierro	15.00
Células de Lupus Eritematoso	30.00
Cloro-total	8.00
Cuanti-Cuantitativo (Hemograma Completo)	8.00
Cultivo de Antibias	15.00
Cultivo de Bacterias Acido Resistentes ...	20.00
Cultivo de Bacterias No Acido Resistentes.	20.00
Cultivo de Frotis Faríngeo	20.00
Cultivo de Líquido Cefalo-raquídeo	20.00
Dehidrogenasa de Acido Láctico	20.00
Depuración de Creatina Endógena	30.00
Dilución y Concentración en Orina	10.00
Dosificación de Acido Úrico en Sangre ...	4.00
Dosificación de Amilasa	10.00
Dosificación de Barbitúricos	80.00
Dosificación de Bilirrubina	8.00
Dosificación de Calcio en Sangre	10.00

Justificación de Glucosa en Sangre	10.00
Justificación de Colesterol en Sangre	10.00
Justificación de Creatinina	8.00
Justificación de Fosfatasa Ácida	10.00
Justificación de Fosfatasa Alcalina	10.00
Justificación de Fosforos en Sangre	10.00
Justificación de Glucosa en Sangre	8.00
Justificación de Inmunoglobinas	90.00
Justificación de N.N.P. en Sangre	6.00
Justificación de Proteínas (Kjeldahl)	12.00
Justificación de Proteínas (Electroforesis)	40.00
Justificación de Reserva Alcalina	19.00
Justificación 17 Ketosteroides	40.00
Justificación de Urobilinogeno en Heces	10.00
Justificación de Urobilinogeno en Orina	10.00
Justificación de Urea en Sangre	8.00
Eritrosedimentación	6.00
Espenograma	20.00
Espenografía	50.00
Espulo (Koch) directo	10.00
Estudio Citológico Secreción Prostática	10.00
Examen General de Heces	8.00
Examen General de Orina	8.00
Fluorescencia para Treponema Pálido Absorbido	30.00
Grasas de 24 horas	20.00
Gastroscopia	10.00
Gota Gruesa (Hematozoario)	8.00
Grupo Sanguíneo y Idi (Banco de Sangre)	10.00
Hematozoario y Fórmula Leucocitaria	10.00
Hematocrito	4.00
Hemocritivo	20.00
Hemograma	5.00
Hemograma y Hemoglobina	7.00
Hemograma	15.00
Investigación de Anticuerpos Aglutinantes	25.00
Karyotype	80.00
Lactograma	6.00
Líquido Sanguíneo	60.00
Líquido Sinovial (Cito-Químico)	30.00
Líquido Articular (Cito-Químico)	25.00
Líquido Cefalorraquídeo	20.00
Líquidos Pleurales (Cito-Químico)	30.00
Lente Roja (Globulos Rojos)	4.00
Mielograma	50.00
Nitrogeno Ureico	8.00
Orina	40.00
Orina	8.00
Orina	5.00
Pruebas de Benedict Jones en Orina	20.00
Prueba de Broncoemulsión	20.00
Prueba de Concentración-Dilución	10.00
Prueba de Coombs	20.00
Prueba de Depuración Ureica	20.00
Prueba de Embarazo (Gravidex)	10.00
Prueba de Fenolsulfatemia	15.00
Prueba de Hanger	7.00
Prueba de Latex	10.00
Prueba de Lazu	6.00
Prueba de Resistencia (Globular)	10.00
Prueba de Resistencia Ac-Resistentes	40.00
Prueba de Timol	7.00
Prueba de Tolerancia a la Glucosa (Exton-Rose)	20.00
Prueba de Tolerancia a la Glucosa (Standard)	30.00
Prueba de Función Médula Ósea	45.00
Prueba de Recuento de Eosinófilos	5.00
Prueba de Recuento de Frel	8.00
Prueba de Recuento de Plaquetas	5.00
Prueba de Recuento de Paul-Bunnell	10.00
Prueba de Recuento de Vidal, Weil y Félix-Hang	10.00
Pruebas de Recuento	3.00
Prueba de Recuento de Orilla	3.00
Prueba de Recuento Periférica (Anormalidades de Leucocitos)	10.00
Prueba de Recuento de Orilla	8.00
Prueba de Recuento de Protrombina	10.00
Prueba de Recuento de Sangramiento y Coagulación	10.00

Transaminasa	12
Triglicéridos	20
Tubaje Duodenal	25
Tubaje Gástrico (Químico)	20
V.D.R.L.	10

Servicio Especial
Cuba Cuba

RADIOLOGÍA

Dentaria por Placa	2.00	1.
Oclusivas Dentarias	5.00	2.
Mano Ap. y Lat.	11.00	4.
Muñeca Ap. y Lat.	11.00	4.
Antebrazo Ap. y Lat.	11.00	4.
Codo Ap. y Lat.	11.00	4.
Hombro Ap. y Lat.	11.00	4.
Hombro Ap.	15.00	5.
Clavicula Ap.	15.00	5.
Cadera Ap.	15.00	10.
Pelvis Ap.	20.00	10.
Femur Ap. y Lat.	20.00	10.
Rodilla Ap. y Lat.	10.00	10.
Pierna Ap. y Lat.	15.00	6.
Tobillo Ap. y Lat.	15.00	6.
Bie Ap. y Lat.	8.00	4.
Cranio Pa Lat. Occipital	25.00	15.
C. Cervical Ap. y Lat.	20.00	10.
C. Dorsal Ap. y Lat.	30.00	10.
C. Lumbar Ap. y Lat y Spots St.	30.00	10.
Sacrocoix Ap. y Lat.	30.00	10.
Esternón Ap. y Lat.	20.00	10.
Costillas Ap.	20.00	10.
Mastoides 2 Vistas Bilaterales	25.00	15.
Senos Paranasales	20.00	10.
Agujeros Opticos	20.00	10.
Cara Water y Lat.	20.00	10.
Maxilar Inferior Pa. Oblicuas.	15.00	5.
Marsa. Nasales	15.00	5.
Articulacion Temporomaxilar	20.00	10.
Orbitas	20.00	10.
Fluoroscopia del Torax	10.00	10.
Torax Ap.	15.00	10.
Abdomen Simple	15.00	10.
Abdomen Agudo (tres piezas)	30.00	20.
Pielograma I.V.	60.00	20.
Pielograma Retrogrado	60.00	20.
Cistograma	60.00	10.
Uretrografia	60.00	10.
Mamografía Bilateral	20.00	20.
Sialografia	30.00	30.
Pelvimetria	30.00	20.
Esófago, Estomago y Duodeno.	40.00	20.
Intestino Delgado	40.00	20.
Colon	40.00	20.
Colocistografía Oral	30.00	20.
Colocistografía I. V.	50.00	30.
Colangiograma Operatorio	30.00	30.
Colangiograma Pos-operatorio.	20.00	15.
Colangiograma Percutáneo		
Fresh	30.00	50.00
Pancreatografía	60.00	50.00
Ateriografía de Miembros S.E.		
Inf.	60.00	60.00
Venografía de Miembros S.E.		
Inf.	50.00	60.00
Aortografía	125.00	100.00
Cuvografía	125.00	100.00
Linfangiografía	150.00	100.00
Arteriografía Cerebral	75.00	50.00
Ventriculografía	75.00	50.00
Neuroencefalografía	125.00	100.00
Mielografía	75.00	50.00
Arteriografía Arco Aórtico	125.00	100.00
Arteriografía Selectiva Visceral.	125.00	100.00
Cineangiocardografía	125.00	100.00
Angiocardiografía	125.00	100.00
Esplenoportografía	80.00	80.00
Hemograma	80.00	80.00

	Servicio Especialista	Colones
Tomografía (por sección)	15.00	5.00
Retroneuroperitoneo	80.00	80.00
Carbuangiografía	80.00	80.00

RADIOTERAPIA

	Colones
Aplicaciones Superficiales, por cada área	5.00
Terapia Convencional, aplicación de 400 Rads c/u	8.00
Aplicaciones de Cobalto, 400 Tads cada uno	8.00
Por cada Aplicación de Radium (80 mg. x 100 horas)	100.00
No incluye derecho a Sala de Operaciones, ni anestesia, ni transfusiones, ni pensionado.	

MEDICINA NUCLEAR

Captación de I-131 a las 2 h. y las 24 h. T3, T4, o ITL	25.00
Centellograma del Tiroides	25.00
Centellograma del Tiroides	50.00
Volumen Sanguíneo y Plasmático	25.00
Determinación de la Masa Celular Roja. Supervivencia Globular con Cromiun 51. Estudio de la Regeneración de los Glóbulos Rojos	50.00
Prueba de Schilling	50.00
Centellograma Hepatoesplénico	150.00
Centellograma Cerebral	150.00
Centellograma Renal	150.00
Centellograma Pulmonar	150.00
Centellograma del Paratiroides	100.00
Centellograma Cardíaco	150.00
Centellograma Hazo	150.00
Centellograma de Páncreas	200.00
Renograma Isotópico	100.00
Placentografías	80.00
Centellograma Oseo	150.00
Estudio de Hierro 59 en el Plasma y Glóbulos Rojos	50.00
Prueba de Insuficiencia Pancreática y Mal Absorción Intestinal	75.00
Rastreo Corporal	150.00

HEMODIALISIS

Por cada sesión de Hemodiálisis	50.00
Este precio solamente incluye el servicio del técnico y el uso del aparato de hemodiálisis. Todos los materiales necesarios corren a cuenta del interesado. Se cobrarán al costo, más un recargo del 50%.	

CARDIOLOGIA

Por cada Electrocardiograma	20.00
Por cada Fonocardiograma	75.00
Por cada Angiocardiograma	150.00
Por cada Prueba de Esfuerzo	40.00
Por cada Cateterismo Intracardiaco	600.00
Por cada Cardioversión	100.00

NEUMOLOGIA

Broncoscopia (rígido)	35.00
Fibrescopia (flexible)	75.00
Este precio incluye: El uso de la sala y del aparato. Los materiales necesarios se cobrarán al costo más el 50% del recargo.	
Prueba de la Función Pulmonar	50.00

ELECTRODIAGNOSTICO

Electroencefalografía	80.00
Ecoencefalografía	50.00
Audiometría Simple, Adaptación y Reclutamiento SISI	12.00
Nistagmografía	100.00

ANATOMIA PATOLOGICA

Biopsias	40.00
Estudio de Piezas Operatorias Medianas.	35.00

ANATOMIA PATOLOGICA

	Colones
Estudio de Piezas Operatorias Grandes. Autopsias sin Fines Médico-legales	800.00
Embalsamamiento de un Cadáver, por simple Inyección	300.00
Embalsamamiento de un Cadáver con Evisceración	500.00
Citología Exfoliativa Vaginal	10.00

FISIOTERAPIA

Mecanoterapia, cada sesión	5.00
Corrientes Galvánicas, cada sesión	5.00
Corrientes Alternativas de Baja Frecuencia, cada sesión	5.00
Corrientes Sinusoidales, cada sesión ...	5.00
Corrientes de Alta Frecuencia, cada sesión	5.00
Ultravioletas, cada sesión	5.00
Infrarrojos, cada sesión	5.00
Inductotermia, cada sesión	6.00

ODONTOLOGIA

Consultas	3.00
Extracciones	5.00
Profilaxia Dental	15.00
Obturaciones de Amalgama de Plata (simples)	15.00
Obturaciones de Amalgama de Plata (complejas)	20.00
Obturaciones de Silicato	15.00
Tratamiento Periodental simple (detartraje)	20.00
Tratamiento Periodental Complejo (detartraje)	25.00

DISPOSICIONES GENERALES

Servicio de Pensionado

1. Los Servicios Nacionales de Salud del Ministerio de Salud Pública que disponga de instalaciones adecuadas proporcionarán asistencia médica en Pensionados Especiales y Generales.

2. El Ministerio de Salud Pública determinará los locales y su número, que pueden dar servicio de Pensionado Especial y Pensionado General en cada establecimiento de acuerdo con sus instalaciones y recursos.

3. Todos los médicos que tengan nombramiento como miembros del Cuerpo Médico Activo, Cuerpo Médico Consultivo, Cuerpo Médico de Cortesía y Cuerpo Médico Honorario de los hospitales y centros de salud (Arbitros Nos. 41 y 74 del Reglamento General de Hospitales del Ministerio de Salud Pública y Asistencia Social), podrán atender a sus pacientes privados en el servicio de pensión, excepto los miembros del Cuerpo Médico Residente que por la naturaleza de sus cargos, están habilitados de ejercer la profesión en forma privada (Art. 49 del Reglamento arriba citado y los que por faltas cometidas en el ejercicio de su profesión hayan sido suspendidos como tales.

Todos los Odontólogos que tengan nombramiento como miembros facultativos de los hospitales y centros de salud, podrán atender a sus pacientes privados en el servicio de pensión, excepto los miembros facultativos que por faltas cometidas en el ejercicio de su profesión hayan sido suspendidos como tales.

4. Todo paciente de pensión tendrá su médico privado. Los asistentes de residentes, médicos residentes o jefes de residentes atenderán a los pacientes del servicio de pensión únicamente en casos de urgencia y sin remuneración, para mientras llega su médico privado.

5. Los profesionales especialistas que practiquen los exámenes, estudios, aplicaciones e in-

interpretaciones que figuran en las secciones de **RADIOTERAPIA, MEDICINA NUCLEAR, CAR-DIOLOGIA, NEUMOLOGIA, ELECTRODIAGNOS-TICO, ANATOMIA PATOLOGICA Y ODONTO-LOGIA** cubrirán como honorarios profesiona-les el 40% de estas tarifas.

6. El servicio de pensionado consistirá básicamente en: alojamiento, servicios generales de enfermería, alimentación a los pacientes y ropa de cama.

7. Para los efectos de aplicación de tarifas, el día en los hospitales y centros de salud se computará desde las doce horas y cualquier fracción mayor de dos horas se contará como un día.

8. Al efectuar la liquidación de la cuenta, se devolverá al interesado el excedente del dinero dejado en depósito.

9. Se permite la permanencia de un acompañante y la contratación por cuenta del paciente de una enfermera especial, sin derecho a cama y alimentación que serán pagadas según estas tarifas.

SALA DE OPERACIONES

10. Para los efectos de esta reglamentación se establecen las siguientes definiciones: Cirugía Mayor: se considera como cirugía mayor aquella en la que el paciente es sometido a un tratamiento cruento que supone riesgo para su vida y que requiere habitualmente atención postoperatoria. En estos casos con frecuencia se penetra en las grandes cavidades del organismo (cráneo, tórax, o abdomen); se extirpan órganos, se corrigen lesiones o defectos o se interviene sobre miembros o parte de los mismos (amputaciones, resecciones, correcciones o reparaciones) Cirugía Menor: se considera cirugía menor, aquella en la que el paciente es sometido a un tratamiento cruento que no implica un riesgo importante para su vida, y que habitualmente no requiere internación posterior, salvo razones ajenas a la operación, (residencia rural, necesidad de curaciones repetidas, etc.). Ejemplos de cirugía menor: Abertura y drenaje de abscesos, extirpación de lipomas o quistes superficiales, suturas de la piel y tejido celular, aplicación de neumotórax, punciones raquídeas, pleurales o abdominales, endoscopias y extracción de cuerpos extraños.

11. Los pacientes sometidos a tratamientos quirúrgicos en las salas del hospital o centro de salud, que posteriormente, sean trasladados a los pensionados, pagarán los derechos de sala de operaciones conforme la disposición anterior.

OTROS

12. El personal que trabaje en el Ministerio de Salud Pública y en todas sus dependencias, gozarán de la asistencia médico-hospitalaria, conforme lo regulan las Disposiciones Generales de la Ley de Presupuesto General, con un descuento del cincuenta por ciento de estas tarifas.

13. Estas tarifas y Disposiciones Generales estarán en vigencia ocho días después de su publicación en el Diario Oficial.

Quedan derogadas todas las tarifas anteriores de los establecimientos dependientes del Ministerio de Salud Pública y aquellas regulaciones que se opongan a las presentes. — Comuníquese. (Rubricado por el señor Presidente de la República). El Ministro de Salud Pública y Asis-

Acuerdo N° 2440.

San Salvador, 7 de septiembre de 1974.

En vista de que el Ing. Alfredo Salomón Aquino, Director de los Servicios Administrativos del Ministerio de Salud Pública y Asistencia Social, se le ha concedido licencia remunerada del 4 al 26 de septiembre en curso, con motivo de una misión oficial en el exterior, según Acuerdo N° 2370 de 3 del corriente, el Poder Ejecutivo

ACUERDA:

autorizar al Lic. Isidro Aristides Cuius Viana, para que en su carácter de Director Interino de los servicios Administrativos del citado Ministerio, firme en el desempeño de su cargo, durante el lapso indicado, correspondencia de mero trámite, quedando también autorizado para firmar solicitudes de inclusión y descargo de inventario, solicitudes de matrículas de vehículos y transcripciones de acuerdos ejecutivos, así como resoluciones o providencias previamente autorizadas por los señores Ministro y Subsecretario de Salud Pública y Asistencia Social. —(Comuníquese. (Rubricado por el señor Presidente). El Ministro del Ramo. AGUILAR OLIVA.

MINISTERIO DE OBRAS PUBLICAS

RAMO DE OBRAS PUBLICAS

Acuerdo N° 310.

Palacio Nacional:

San Salvador, 9 de septiembre de 1974.

De conformidad con los Contratos Nos. 80 (L. O. Resolución N° 80/74) y N° 85 (L. O. Resolución N° 90/74) dictados por la Providencia Específica de Obras Públicas, los días ocho y veintisiete de julio pasado, respectivamente, el Poder Ejecutivo ACUERDA: autorizar a la Dirección General de Tesorería para que, con cargo a las cifras 76-800-25-302-20-309-010-531-131, Programa Vías Urbanas (Coes-Urb) y 76-800-42-301-35-011-131, Programa Evaluación de Recursos Minerales del Presupuesto General vigente, pague a la Firma Xerox de El Salvador, S. A. de C. V., representada legalmente por el señor Segismundo Brett, las cantidades de: novecientos setenta y un colones veinticinco centavos (¢ 971.25) por mensualidades vencidas de ciento treinta y ocho colones setenta y cinco centavos (¢ 138.75) cada una durante el período del primero de junio al treinta y uno de diciembre de este año, valor del arrendamiento de una Máquina Copadora marca Xerox modelo 604, para el Programa Vías Urbanas (Coes-Urb) de la Dirección General de Urbanismo y Arquitectura; y dos mil setecientos colones (¢ 2,700.) por mensualidades vencidas de doscientos quince colones (¢ 215.00) cada una, durante el período del primero de enero al 31 de diciembre del año en curso, valor del arrendamiento de una Máquina Copadora Xerox 914, para servicio del Centro de Investigaciones Geotécnicas. Para dar cumplimiento a estos compromisos la Dirección de Contabilidad Central del Ministerio de Hacienda constituyó con fecha veintiseis de mayo y dieciséis de febrero de este año las Reservas de Crédito Nos. 3-39-A/1897 año las Reservas de Crédito Nos. 3-39-A/1897 y No. 11/19/62/373, respectivamente, según consta en las solicitudes para Compromiso, según consta en las solicitudes de mayo y veinte de enero de Fondos del catere de mayo y veinte de enero de este mismo año. —Comuníquese. (Rubricado por el señor Presidente de la República). El Ministro de Obras Públicas, SEAMAN.

**APPENDIX H:
ISSS-COVERED FIRMS THAT ALSO PURCHASE
ADDITIONAL HEALTH SERVICES/COVERAGE
Page 1 Of 2**

INSTITUCION	COTIZA ISSS	OTRO PROGRAMA	POB. CUBIERTA	COSTOS (COL.)	PROMEDIO/PERSO.
(A) BANCOS					
Central	Si	Si	1,600.00	96,000.00	60.00
Hipotecario	Si	Si	1,000.00	229,877.00	229.88
Decarrollo	Si	Si	260.00	25,000.00	96.15
Capitalizador	Si	Si	609.00	240,000.00	394.09
Salvadoreno	Si	Si	2,000.00	1,500,000.00	750.00
Financiero	Si	No	0.00	0.00	0.00
Credito Popular	Si	Si	2,600.00	644,390.00	247.84
Comercio	Si	Si	700.00	72,000.00	102.86
Agricola	Si	Si	900.00	387,498.70	430.55
Fomento Industrial	Si	Si	No data	215,346.88	
Mercantil	Si	Si	219.00	48,677.00	222.27
Cuscatlan	Si	Si	2,246.00	210,000.00	93.50

INSTITUCION	COTIZA ISSS	OTRO PROGRAMA	POB. CUBIERTA	COSTOS (COL.)	PROMEDIO/PERSC.
(B) AHORRO Y PRE.					
Central Ahorros	Si	Si	225.00	22,000.00	97.78
Alfacall	Si	Si	280.00	12,000.00	42.86
Aprisa	Si	No			
Crece	Si	Si	94.00	51,931.43	552.46
???	Si	Si	258.00	80,000.00	310.08
Ahorromet	Si	Si	526.00	48,984.00	93.13
(C) GUBERNAMENTALES					
Bienestar Magist.	No	Si	125,000.00	18,000,000.00	144.00
M. de Hacienda	Parcial	Si	2,100.00+	100,800.00	
CEL	Parcial	Si	10,000.00	9,000,000.00	900.00

**APPENDIX H:
ISSS-COVERED FIRMS THAT ALSO PURCHASE
ADDITIONAL HEALTH SERVICES/COVERAGE
Page 1 Of 2**

INSTITUCION	COTIZA ISSS	OTRO PROGRAMA	POB. CUBIERTA	COSTOS (COL.)	PROMEDIO/PERSC.
(A) BANCOS					
Central	Si	Si	1,600.00	96,000.00	60.00
Hipotecario	Si	Si	1,000.00	229,877.00	229.88
Desarrollo	Si	Si	260.00	25,000.00	96.15
Capitalizador	Si	Si	609.00	240,000.00	394.09
Salvadoreno	Si	Si	2,000.00	1,500,000.00	750.00
Financiero	Si	No	0.00	0.00	0.00
Credito Popular	Si	Si	2,600.00	644,390.00	247.84
Comercio	Si	Si	700.00	72,000.00	102.86
Agricola	Si	Si	900.00	387,498.70	430.55
Fomento Industrial	Si	Si	No data	215,346.88	
Mercantil	Si	Si	219.00	48,677.00	222.27
Cuscatlan	Si	Si	2,246.00	210,000.00	93.50

INSTITUCION	COTIZA ISSS	OTRO PROGRAMA	POB. CUBIERTA	COSTOS (COL.)	PROMEDIO/PERSC.
(B) AHORRO Y PRE.					
Central Ahorros	Si	Si	225.00	22,000.00	97.78
Atlacatl	Si	Si	280.00	12,000.00	42.86
Aprisa	Si	No			
Crece	Si	Si	94.00	51,931.43	552.46
???	Si	Si	258.00	80,000.00	310.08
Ahorromet	Si	Si	526.00	48,984.00	93.13
(C) GUBERNAMENTALES					
Bienestar Magist.	No	Si	125,000.00	18,000,000.00	144.00
M. de Hacienda	Parcial	Si	2,100.00+	100,800.00	
CEL	Parcial	Si	10,000.00	9,000,000.00	900.00