PN-AAT-254

ISN [illegible]

HEALTH SECTOR POLICY AND PROGRAM REVIEW

AID/EL SALVADOR

ANDREW W. NICHOLS, M.D., M.P.H.
PROFESSOR OF FAMILY AND COMMUNITY MEDICINE
UNIVERSITY OF ARIZONA COLLEGE OF MEDICINE
TUCSON, ARIZONA 85724

BASED ON SITE VISIT OF AUGUST 13 THROUGH 25, 1984

PREPARED FOR UNIVERSITY RESEARCH CORPORATION

004293

CO 0084
S

SUBMITTED: OCTOBER 15, 1984

FIRST REVISION: DECEMBER 15, 1984

SECOND REVISION: APRIL 15, 1985

HEALTH SECTOR POLICY AND PROGRAM REVIEW

AID/EL SALVADOR

ANDREW W. NICHOLS, M.D., M.P.H.

	Page
I. Context of Site Visit	1
A. Challenge of the World Health Organization (WHO)	1
B. Request of AID/El Salvador	2
II. Statement of Work	3
A. Data Collection and Analysis	3
B. Review of MSPAS Activities and Resource Allocation	3
C. Recommendations	4
D. Follow-up Visits	4
III. Health Status and Population Demographics of El Salvador	5
A. External Data Sources	5
B. Ministry of Health (MSPAS) Data	6
1. Mortality	7
a. Ten Primary Causes	7
b. Infant and Maternal	7
c. Perinatal and Children Under 5 Years	8
d. Cancer	9
e. Homicides	9
2. Morbidity	10
a. Ten Primary Causes	10
b. Tuberculosis	11
c. Syphilis and Gonorrhea	11
d. Malaria	11
e. Measles	12
3. Population Demographics	12
a. Birth Rate	13
b. Population Growth Rate	13
IV. Health Organization in El Salvador	14
A. Non-Government Health Programs (International)	14
1. International Committee for the Red Cross (ICRC)	14
2. Interamerican Development Bank (BID)	15
3. Pan American Health Organization (OPS)	16
B. Health Delivery Systems in El Salvador (MSPAS, ISSS, ANTEL, Bienestar Magisterial, Sanidad Militar)	17

Page

C. Ministry of Public Health and Social Assistance (MSPAS) 18

1. Organization 18
a. Central 18
b. Regional 20

2. Manpower 21
a. Physicians 21
b. Nurses 22
c. Rural Health Aides 23
d. Human Resource Development and Training 24

3. Facilities 24
a. Hospitals 24
b. Health Centers 26
c. Health Units 26
d. Health Posts 27
e. Community Posts 27

4. Budget 28
a. Internal 28
b. Comparative 29

V. MSPAS Health programs 30

A. Activities 30

1. Health Education 30
2. Family Planning/Maternal and Child Health 31
3. Environmental Sanitation 32
a. Plansabar 32
b. Sanitary Inspection Activities 33
4. Immunization 34
5. Rabies and Malaria Control 35
6. Medical Consultations 36

B. Data Reporting System 37

1. Commitment and Tradition 37
2. Method 37
3. Epidemiology Reports 38
4. Statistical Reports 38
5. Data System Analysis 38

VI. Site Visits 40

A. Methodology 40

1. Site Selection 40
2. Limitations 41

B. Description 42

1. Metropolitan 42
2. Western 43
3. Central 45
4. Eastern and Paracentral 46

C. Observations 48

1. Facilities/Equipment 48
2. Staffing/Personnel 49
3. Data Collection 50

VII. MSPAS Health Priorities and Resources 51

A. Health Priorities 51

1. Reported 51
2. Observed 51

B. Resource Allocation 52

1. Present 52
2. Potential 53

C. Five Year Plan (1985-89) 53

1. Content 53
2. Reaction 55
3. Analysis 56

VIII. Recommendations 58

A. Current Programs 58

B. Future Directions 60

1. Community Oriented Primary Health Services 60
a. Promote Community Participation 61
i. Strengthen the "Patronato" System 61
ii. Improve Local Volunteer Program 62
iii. Investigate Minimum Charges for Medications 64
b. Conduct Community Needs Assessments with Professional Participation 65
c. Implement Program Evaluation at the Local Level 66

2. Integrated Rural Development 67
a. Expand Health Education Programs 68
b. Strengthen Current Nutrition Programs 69
c. Continue with Current Sanitaiton Programs and Develop New Programs 70
i. Install Additional Potable Water Systems 71
ii. Construct Additional Latrines 71
iii. Eliminate Mosquito Breeding Areas 72

Page

3. Human Resources Development 73
   a. Increase Training Capacity for Physicians in Primary Health Care, Nutrition and Disease Prevention 73
   b. Expand Continuing Education for all Health Professionals 74
   c. Review and Strengthen the Rural Health Aide Program 75

C. Role of Medical Education/University of El Salvador 76

D. Loans vs. grants 77

E. Schedule of Follow-up Visits--Mid-term and Final Evaluations 78

IX. Summary and Conclusions 79

X. Footnotes/Bibliography 82

MAP 86

TABLES 88

I. Ten Primary Causes of Death--1981 and 1977 89
II. Deaths in Children Less Than Five Years of Age--1976-1982 90
III. Maternal Mortality--1978-1982 91
IV. Ten Primary Causes of Transmissible Illnesses--1983 92
V. Births, Deaths and Natural Growth of Population--1979-1983 93
VI. National Plan of Basic Rural Sanitation--1983 94
VII. Epidemiologic Report of Preventable Infectious Diseases--1978-82 95
VIII. Plan Salud--1985-1989 96

APPENDICES 98

I. Background Information on Health Sector Policy and Program Review 99
II. AID Personnel Procurement Notice for Public Health Epidemiologist, USAID, July, 1984 104
III. Current and Proposed Organizational Charts--MSPAS 106
IV. General Budget Laws--1984: Government of El Salvador 115
V. Weekly Epidemiology Report, Ministry of Health, May, 1984 122
VI. Daily Activity Reports--Site Visit to El Salvador, August 13-25, 1984 130
VII. Medical Curriculum--1984: University of El Salvador and Evangelical University Medical Schools 186
VIII. Role of USAID--Suggested Directions 192

Page

IX. Missing, Killed and Imprisoned Persons--University of El Salvador Medical School, 1980-1983 196
X. Curriculum Vitae--Andrew W. Nichols, M.D., M.P.H. 198

I. CONTEXT OF SITE VISIT

A. Challenge of the World Health Organization (WHO)

The overriding theme of the World Health Organization--Health for All by the year 2000--is a necessary prelude to any consideration of health services in El Salvador. Passed by the World Health Assembly in 1976 and repeatedly reaffirmed in a series of documents, Health for All has become the rallying cry for those who would see improved health services around the world. Slighted by some as an idealistic and impossible goal, it is seen by others as the yardstick which will measure the acceptability and direction of all health programs between now and the end of the century. Do they promote health for all by that time? Are they rooted in primary care as a means of achieving that goal? If this is the only purpose which it serves, the "Health for All" theme may well be the most important health-related theme to emerge from the latter half of the twentieth century.

The World Health Organization (WHO) has taken the theme of Health for All by the year 2000 quite seriously. When the World Health Assembly perceived that the administrative structure of the organization was not congruent with implementation of the theme, it mandated that this structure be changed. (1) One result was the redirection of resources into more field programs and fewer central office or bureacratic activities.

A particular focal point for health for all was the Alma-Ata Conference held in the Soviet Union in 1978. It was here that primary care was defined and articulated as an integral part of health for all. It was here that primary care came to be seen as more than an adjunct to specialized health services, it was here that primary health care was recognized as the keystone around which all other health care services were structured.

Following Alma-Ata, health for all has been reinforced in many different settings, including the Americas. The Pan American Health Organization (PAHO) has affirmed and reaffirmed its support of the concept. (2)

An analysis of "health for all" suggests that the goal being sought is not health care but <u>health</u> itself. Given what is known about the causes of ill health, much of what has already been recommended in this report is reinforced. That is, a sanitary environment coupled with health education are as important, if not more important, than actual health services delivery. Each and every program to be considered in El Salvador and elsewhere needs to be viewed in terms of its potential for increasing the health of the population.

The implications of health <u>for all</u> is that the health to be established is not selective or available only to certain segments of a population. Much discussion in El Salvador currently centers around whether there shall be a single health system or many health systems. The outcome of this particular discussion is less important than that there be a system designed which will spread its benefits uniformly throughout the population. If only a select few are served, it is not health for all.

The last part of the theme, health for all by the year 2000, imparts a sense of urgency. It is not enough to plan programs which may bring relief at some time in the distant future. Rather, programs must be scrutinized in terms of their capacity to assure results in the remaining decade and a half of this century. Anything less than that will miss the objective of health for all by the year 2000. To the degree that they subscribe to this theme, both the Government of El Salvador and AID/El Salvador must direct their program planning accordingly. It is to this end that the AID/El Salvador Health Sector Policy and Program Review was undertaken and the recommendations in this report are dedicated.

B. Request of AID/El Salvador

The Ministry of Public Health and Social Assistance (MSPAS) of El Salvador has accepted the challenge of the World Health Organization in its planning documents. (See Section VII-C-1.) AID/El Salvador, working in conjunction with the Ministry, has responded by giving priority to "Health for All" in its own program planning and implementation.

Current AID health efforts in El Salvador are directed at providing emergency assistance to an economy torn by conflict and a health system facing acute shortages of supplies and equipment. This Health System Vitalization Project (VISISA) has as its purpose assisting MSPAS to:

> "1.) Increase existing levels of primary health care and emergency medical services to the Salvadoran population by meeting the critical short term needs of the Ministry of Health (MOH) for essential goods and services, and
>
> "2.) Vitalize the international capacity of the MOH to more effectively execute their existing systems in health supplies management, maintenance and information management." (3)

The VISISA project has been approved for a total budget of $25,000,000, $23,400,000 of which is in the form of a loan. Repayment is over 40 years with a 10 year grace period and interest at 2 percent during the grace period and 3 percent thereafter. This involves an increase in FY 1983 funding from the originally approved $9,000,000 to $16,800,000. (4) It is clear that the shortages in supplies and equipment have been greater than originally anticipated, or reflected in the change in requested funding levels.

The VISISA project has not been without criticism in the United States. The basic concern has centered around the belief that the project can not be implemented in an effective manner. It is also felt that the VISISA project does not address the health problems of El Salvador in their totality. As such, a more effective and comprehensive approach is called for which will assist El Salvador in attaining its goal of "Health for All by the Year 2000."

Both AID and its critics have joined in agreeing to the desirability of such an approach. Consequently, an independent health sector program and policy review was requested. That request forms the basis for the present study. A more detailed review of this matter is provided in Appendix I. See References 5, 6 and

II. STATEMENT OF WORK

The general objective for the project, as stated in the procurement order, was: "to assess the overall health status of the Salvadoran population and make recommendtions for policy and program reorientation, as required." (8) The document then went on to outline specific tasks required. These, together with a brief rationale on their inclusion in the statement of work, were as follows:

A. Data Collection and Analysis

A central feature of the program review was to be data collection, both from the Ministry of Health and from external data sources. The reason for focusing on the Ministry for data collection is obvious —that is where most information may be found. As will be noted elsewhere in this report, MSPAS has a wealth of data available to it regarding all aspects of its work. The task of the review was to sort through this mass of factual material, then select and arrange that information most useful to program review and design. In this process, trend analysis over time was encouraged.

With regard to external data sources, various international agencies (e.g. Pan American Health Organization, World Bank and Interamerican Development Bank) were cited as useful sources of information. Realizing that such international bodies derive most, if not all, of their data from host country records, they do place this information in regional and international perspective. Further, in the process of gathering data from these external sources, the investigator comes in contact with a variety of different perspectives on current programs and future needs. Just as was the case in talking to MSPAS officials, this interchange proved critical in formulating the recommendations found later in the report.

A final feature of this part of the work plan was assessment of the present MSPAS system for the collection, processing and analysis of data for calculation of health status indicators. While a definitive inplementation of this task would require more time than was available, it did stimulate a review of data collection procedures and reporting mechanisms used for their distribution. Some limited understanding of the process by which data analysis takes place was obtained by interviewing the epidemiologic and statistical sections of the Ministry.

B. Review of MSPAS Activities and Resource Allocation

Following data collection and analysis, the program review was to assess the MSPAS health service delivery system and relate these findings to conclusions drawn from the data. Further, the study was to review current resource allocation in relation to priority health problems and program objectives, as defined by MSPAS. By relating resource allocation to MSPAS defined problems and objectives, the study should minimize the imposition of values held by AID/El Salvador or the author.

The procedure suggested for a health service delivery system review was that of independent, unannounced site visits to various levels of the health delivery system. Where possible, comments were requested on the degree to which the services related to the needs displayed by a review of the data. The advantage of both the site visit procedure and the subsequent analysis is that it would provide a degree of independent perspective of that position taken by either MSPAS or AID/El Salvador.

C. Recommendations

The product and purpose of the AID/El Salvador health sector policy and procedure reviews was to arrive at a set of recommendations which might be useful both to MSPAS and AID. The idea was to establish a set of expanded program plans which would provide a basis for policy development at the conclusion of the VISISA project. Both current and future prioritization of these recommendations was encouraged, with a strong emphasis on follow-up visits to El Salvador for this purpose.

While it is clear that any recommendations deriving from such a brief visit as the present will not necessarily be accepted by MSPAS or AID/El Salvador, one measure of their acceptance will be the degree to which they accurately reflect analysis of the data and feasible options for intervention in the local situation. The challenge of proposing such suggestions is that they not merely reflect one's own bias, but grow out of the analytic process previously described.

D. Follow-up Visits

The current study was visualized by AID/El Salvador not as a single intervention, but a three part policy and program review--with the initial visit resulting in the current report. A return visit to El Salvador at 10 to 11 months for a mid-term evaluation of progress toward policy and program re-orientation as a result of the initial report was requested. This was to be followed by an end of project evaluation 8 to 9 months after that, so as to evaluate achievements and to provide MSPAS and AID/El Salvador with recommendations for future assistance in the health sector.

The value of this aspect of the project is that it assures continuity and accountability. By requesting such follow-up participation by an independent evaluator, AID is demonstrating a willingness to open its policy and program activities to continual outside review. By doing so in the manner proposed, a continuity of effort is assured that might not otherwise be the case.

The precise wording of the procurement order for this study may be found in Appendix II. (See Reference 8.)

III. HEALTH STATUS AND POPULATION DEMOGRAPHICS EL SALVADOR

One of the primary functions of the initial visit to El Salvador in connection with the study was to assess health status in the country and to make preliminary judgements concerning program design in relation to identified problems. Much of the present section is devoted to the health status issue, with brief consideration of population demographics because of their relationship to health. A more extensive discussion of the demographic situation in El Salvador can be found elsewhere.

A. External Data Sources

The problems of the region in which El Salvador is located are well known. A report on "Priority Health Needs in Central America and Panama," (2) prepared by the Pan American Health Organization, references the high rate of illiteracy, and generally high infant mortality rate in the region. (Costa Rica and Panama are exceptions, as they are with reference to life expectancy, which is otherwise low in Central America and Panama.) The report goes on to point out that malnutrition is endemic, accompanied by a high death rate for children under 5 and a high general morbidity. Whereas the Central American countries constitute only 3.5% of the population of the Americas, over one third of all recorded cases of malaria on the continent are to be found in this area.

Measured by these and other indicators of poor health, it may be concluded that health care delivery and general sanitation in the region are inadequate for the task at hand. The average annual number of visits to a health care facility is 0.4 to 2.6 per person, while a figure of 4 or more might be expected in a developed country. Indeed, some 40% of the population are estimated not to have permanent access to any health services, with three of the countries in the region spending less than 40 dollars per person per year on health care delivery. Clearly, the countries in the region are a long way from realizing the goal of "health for all by the year 2000."

Independent data on health status in El Salvador are difficult to obtain. This is because international agencies tend to rely upon data as reported by the respective Ministries of Health. The major value of such data is in comparison to other countries in a similar situation, both in the region and in the world. Annually the Population Reference Bureau, Inc. publishes a well documented population data sheet which commpares countries throughout the world for data such as infant mortality rate, life expectancy at birth, overall mortality rate and other population information.

With reference to El Salvador, the Bureau's 1983 report shows the infant mortality rate in 1981 to be 53 as against a regional average of 58 and world average of 84. (The average figure for more developed countries is listed as 19.) Life expectancy at birth is listed as 64 in El Salvador, compared to 65 in the region and 62 for the world. (The average rate given for the "more developed" countries is 73.) With reference to birth and death rates (deaths

per year per 1,000 population), El Salvador is slightly higher than comparable figures for its region, data for El Salvador being 36 and 10, respectively, with comparable regional data of 34 and 7. The total fertility rate (average number of children that will be born for each woman if she were to live through the child bearing lifetime bearing children at the same rate as women of those ages actually did in a given year) is listed as 6.3 for El Salvador, compared to 4.9 for the region and 3.9 for the world. (9) (In the "more developed" countries total fertility rate is reported to be 1.9.)

Another source, the World Bank, groups countries in terms of their economies. Based on its gross national product (GNP) per capita for 1981, El Salvador was listed as having a GNP per capita of $650, compared with an average for all low and middle income countries of $850 or of all middle income countries of $1,500. In other words, El Salvador stood well below the mean GNP per capita in its category of economies, this being the lower middle-income countries. (10)

According to the same source, El Salvador had a life expectancy at birth in 1981 of 63 compared to 57 for other lower middle income countries. In like manner, its infant mortality rate was listed as 75 in 1981, compared to 95 for countries in its class. (This is despite the fact only three countries--China, Sri Lanka and Madagascar, among 34 low-income economies--were reported to have a lower infant mortality rate than El Salvador.) The death rate for children one to four years of age for El Salvador in 1981 is listed as 7, compared to 14 for countries in a similar category. (10)

With regard to health providers, El Salvador is well staffed for its category, having one physician for every 3,040 people reported in 1980 (versus a lower middle-income country norm of one per 7,751) and one nurse for every 170 people (versus a figure in comparable countries of one nurse for every 2,261 people). (10) In short, compared to other countries in its class, El Salvador is reasonably well off with respect to health manpower. When compared to more developed countries, it has few health providers.

Data such as the foregoing are characteristic of a developing country. A review of mortality, morbidity, population and disease in El Salvador itself, as outlined in section III-B, are characteristic of a country with basic needs in both sanitation and health. El Salvador may be better off than some comparable countries in the world and in the region, but has a long distance to go in order to achieve minimally acceptable health and disease indicators in today's world.

B. Ministry of Health (MSPAS) Data

Three classes of data from the El Salvador Ministry of Health will now be considered. These include mortality, morbidity and selected population demographic data. Where possible, a trend analysis will be noted. (See References 11, 12, 13, 14 and 15.)

1. Mortality

Mortality data will be reviewed in terms of the primary causes of death in El Salvador, with focus on infants, children and mothers. Two causes of death usually associated with more "developed" countries will then be considered--cancer and homicides. Because of the conflict in El Salvador, the latter is of particular interest.

a. Ten Primary Causes

As may be seen from Table I, the 10 primary causes of death in El Salvador in 1981 are headed by those normally associated with developing countries. These include perinatal deaths, deaths due to intestinal infections and those due to bronchitis, emphyzema and asthma. Included in the list is accidental death, common to both developed and developing countries as a major cause of mortality. More unusual for a developing country, yet not unexpected for El Salvador, is the finding that homicide and intentionally inflicted lesions by another constitute a primary (third place) cause of death. (This will be discussed in greater detail in Section III-B-1-e below.)

A substantial change in causes of deaths in the four year interval from 1977 to 1981 is a marked rise in the percentage of deaths associated with the perinatal period (the number one cause of death in 1981) and a decline in deaths associated with intestinal infections (2nd place in 1981) and pneumonia (which went from 4th place in 1977 to disappear from the list of the top 10 causes of death in 1981). Over a longer period (1975 to 1981), a clear drop in the role of bronchitis, emphyzema and asthma as a cause of death may be seen in reviewing other MSPAS data. Beginning to rise on the list, although still relatively less significant, are the diseases of developed countries--heart disease (number 9 in 1981) and cancer (number 6 in 1981). Stroke remains number 8 in rank for both 1977 and 1981.

Whatever else might be concluded from the foregoing data, it is still reasonable to assert that the primary killers in El Salvador are preventable illnesses. These are diseases which are treated by preventive health programs, including sanitary improvements. Of particular importance currently are diseases associated with women and children and generally considered to relate to malnutrition and immunization status. In general, the diseases responsible for the greatest mortality in El Salvador at the present time are those normally responsive to a comprehensive primary health care system.

b. Infant and Maternal

The best indicator of health of a society is generally considered the infant mortality rate. A close competitor is

the usually associated maternal mortality rate. One problem connected with such rates is that, at least in the case of infants, deaths may often go unreported. This is particularly true in El Salvador, where some geographic areas are outside of the direct health service delivery system of the Ministry of Health. (That problem will be discussed in greater detail at the conclusion of this section.)

According to Ministry of Health statistics, the infant mortality rate has gradually improved, having gone from 50.8 in 1978 (55.2 in 1976) to 42.2 in 1982. (See Table II.) These data would appear to be somewhat more favorable than in that mortality data obtained from external data sources already cited. Maternal mortality rates show little variation during the period, being listed as 0.8 in 1978 and 0.7 in 1982. (See Table III.)

In discussion with representatives of the Pan American Health Organization, it was suggested that a much higher infant mortality rate may, in fact, be the case in El Salvador. (A hypothetical figure of 85 was offered.) The reason given was the violence in the countryside, leading to relatively lower use of certain health facilities by the rural population. Ministry officials, when questioned about this, responded that they are still providing care for many, if not most, of the same people, in part because of the internal migration that has taken place in connection with the conflict. Further, the Ministry maintains that most of the facilities it has operated in the past continue to function.

The best synthesis of this sometimes conflicting information seems to be that the true infant mortality rate rests somewhere between that reported by the Salvadoran health authorities and that suggested by PAHO. To the degree that the higher figure is real, it could be more a result of lack of penetration by the Ministry of Health historically into remote rural areas than to the present conflict and the closure of Ministry facilities. (Section VI will explore the question of which and how many facilities are still functioning.)

c. Perinatal and Children Under 5 Years

As may be seen in Table II, just as infant mortality has been steadily dropping over the past few years, so has the proportion of deaths among children under 5 years of age. (Both proportional data and rates are used in the El Salvadoran health statistics reports. Mortality data for children under 5 is routinely expressed as a proportion of total deaths in the population for that year.) The Ministry of Health attributes the reduction of the deaths among children under 5 to its various programs of vaccination, nutrition and oral rehydration, which are specifically directed to this group, as well as general programs of sanitation, malaria control and health education.

The perinatal death rate has also been falling, although somewhat irregularly. Data for 1981 suggest a rate of 19.1 per 1,000 births, but later data are not available at this time. (13) A significant drop in perinatal mortality, as well as infant mortality, appears to have occurred in 1979 and 1980. It is of some interest that a proportional mortality for children under 5 years of age also showed relatively little change during the 4 years preceding 1980, but registered a sharp drop--or improvement--between 1979 and 1982.

The fact that there was some deterioration in this figure between 1980 and 1981 is open to several explanations. One is that the major intervention campaign which took place in 1979 produced results that outpaced a lesser effort in 1980. (These efforts will be highlighted under a discussion of immunizations in Section V-A-4 below.) On the other hand, both the reduction in MSPAS immunization activity in 1980 and the corresponding equilibrium or deterioration in health status indicators in 1981 could be explained as a function of the violence and inability of the Ministry to serve all areas of the country. Either way, the data would appear to suggest that health delivery programs aimed at mothers and children can effectively impact health and disease in an immediate and measurable way.

d. Cancer

As noted previously, diseases of a modern society are beginning to infiltrate El Salvador's ten leading causes of death. While still near the bottom of the list, heart disease, cancer and stroke are inevitably working their way toward higher levels. (This generally indicates a rising level of health, as more individuals live long enough to suffer from degenerative diseases, rather than succumbing to other illnesses at an earlier age.) The Ministry of Health has maintained data on deaths due to cancer over the past several years and this offers some comparison. It is interesting to note that both the proportion of deaths due to cancer and the cancer death rate have changed little, if any, between 1977 and 1982. The slow rise in cancer as a leading cause of death (from 8th place in 1975 to 6th place in 1981) is doubtless a function of falling death rates among the infectious and more preventable diseases. As these other conditions continue to fall in frequency due to the development of improved health programs and a higher standard of living, the relative importance of cancer as a proportional cause of death can be expected to rise.

e. Homicides

One of the more interesting and distressing facts about mortality in El Salvador at the present time is the risk of exposure to homicide in association with the internal

conflict currently underway. An historical review of homicide as a proportional cause of death reveals the greatest problem in the recent past to have been in 1979, with some improvement since that time.

When compared with previous lists of primary causes of death, it is interesting to note that for the years 1975, 1977 and 1979, homicides are always in second or third place, yet jumped to more than double their percentage as a cause of death (3.7 to 8.1) in the four year interval from 1975 to 1979. By 1981 this figure had been reduced to 5 percent of all deaths reported in the country. Absolute numbers of homicide deaths reported are 1,178 in 1975, 1,613 in 1977, 2,637 in 1979 and 1,881 in 1981. (13, 15) Clearly, the key question pertaining to homicide and related deaths is how many are reported to the health care system and how many occur outside of that system.

It is imperative to realize that the homicides reported to the Ministry of Health only include those individuals brought to the Ministry for terminal treatment or for certification of death. Those not reported are a cause for both concern and conjecture.

2. Morbidity

a. Ten Primary Causes

Comparative morbidity data in El Salvador is maintained in terms of the "ten primary causes of transmissible diseases." For perhaps as long as this data has been kept, diarrheal diseases and intestinal parasites have been in the first and second positions respectively. However, there has been a steady diminution in the rate of each of these conditions, diarrhea having fallen from 3,200 to 2,335 cases per 100,000 population between 1976 and 1983. Similarly, intestinal parasites have fallen from a rate of 2,966 to 2,304 per 100,000 population for the same period. As significant as this fall appears to be, it still represents only a small fraction of what could be achieved and indicates the potential need for health care intervention in these two highly susceptible areas. (See Table IV for 1983 data.)

Other general observations concerning changes between 1976 and 1983 include the disappearance of measles from the 10 primary causes of transmissible diseases (this despite an outbreak in 1981-82 with 4,938 cases--for a case rate of 96 per 100,000 population--reported in 1982). One of the more substantial drops in rate in the period 1976 to 1983 occurred for ameobic dysentery, exclusive of amoebic abscess. This is represented by a fall in rate from 307 to 146 cases per 100,000 population during the 7 year period. Other changes will be discussed in connection with specific diseases, which follow.

b. Tuberculosis

One of the most striking declines in the rate of a particular disease has been for tuberculosis. The last time tuberculosis appeared among the top 10 infectious and parasitic diseases was in 1977, when it had a rate of 59 cases per 100,000 population. This represented a drop from the previous year when the rate was 75 per 100,000. (Tuberculosis was the 9th leading cause of disease in 1976 and the 10th in 1977.) Although the rate was not published by the Ministry in 1982, the total number of cases demonstrating a positive bacterial culture had fallen from 8,252 in 1976 to 5,162 in 1982. The 1983-84 Memoria of the Ministry, notes that adverse circumstances have slowed down tuberculosis control programs, including a lack of therapeutic drugs and BCG. (11) Likewise, X-ray diagnosis has been limited by the lack of film and developing fluid.

The lack of both diagnostic tools and treatment for a preventable, yet deadly, disease such as tuberculosis suggests the need for programs to assure such shortages do not recur. The relative contribution of inadequate systems of supply and administration and an acute budget deficit is not fully susceptible to analysis in this study. Suffice it to say that control programs for a disease such as tuberculosis should not be allowed to atrophy.

c. Syphilis and Gonorrhea

Syphilis has maintained itself on the "10 most common causes of transmissible disease" list consistently through the years. In 1976 it was the 7th leading cause with a case rate of 172 cases per 100,000 population. By 1983 it was 8th on the list with a case rate of 77 cases per 100,000 population. So far syphilis has been one of the most stable diseases recorded over the past 5 to 10 years.

Infectious gonorrhea, on the other hand, has moved up slightly from a position of number 8 in 1976 and a case rate of 104 per 100,000 population to the number 6 position in 1983 with a case rate of 113 cases per 100,000 population. This follows an earlier trend in the United States, where there was a rapid rise in gonorrhea, while syphilis either remained stable at a low level or actually fell. It will not be surprising if the gonorrhea rate were to rise further in El Salvador.

d. Malaria

Malaria has remained in 3rd and 4th position consistently through the years as a leading cause of transmissible diseases in El Salvador. From a case rate of 1,975 per 100,000 population in 1976, malaria dropped only to 1,689 per 100,000 in 1982. Then, in 1983, there was a substantial drop

to 1,251 cases per 100,00 population, with an actual reduction in the number of cases reported in these two years of approximately 20%. (The significance of this decline is debatable, given the known propensity for malaria to rebound to former levels as control programs are relaxed.)

The Ministry of Health attributes the recent diminution of malaria cases to the change in control methods initiated in 1980. At that time a decision was taken not to attempt eradication of malaria, but to stress control. The country was divided into three priority areas geographically, the first priority representing 85% of all malaria cases and 23% of the land area. A massive program utilizing volunteer collaborators (2,563 in 1983) was designed to detect and treat cases in the field. More than 80% of all malaria cases are so identified and managed. Every effort is being made to increase the number of voluntary collaborators and other control mechanisms in the first priority zone. (A more complete discussion of malaria control methods may be found under Section V-A-5 below.)

e. Measles

In their paper on "Humanitarian Assistance to El Salvador--Health Related Issues," Goldstein, Gellhorn and Lawrence quote a "550% increase in reported cases of measles" between 1980 and 1981. (These data were taken from a March, 1982 U.S. AID-OFDA application.) (7) Indeed, measles appeared in several reports in 1982 as being among the 10 leading transmissible diseases for a case rate of 96 per 100,000 population. However, by 1983 this had fallen to 46 per 100,000 population and measles was no longer among the top 10 diseases. Taking its place was varicella, which had not appeared in 1982, but occupied 7th place in 1983 with a case rate of 82 per 100,000 population.

In this regard, the Ministry of Health reports a measles vaccination rate for children between 6 months and 1 year of age to be 41.4%. The Ministry credits its increased activity in this area to the development of a functional cold chain which permits transportation of vaccines to their point of destination, the utilization of voluntary agencies and others to take vaccination campaigns into zones of conflict, and a large public relations campaign, utilizing the press, radio and TV to inform the population of the benefits of measles vaccine. Even despite these efforts, the Ministry reports that its efforts were not totally successful in the conflict zones.

3. Population Demographics

El Salvador has traditionally had a very high birth rate. As noted previously, when compared with other countries in its region and in the world, the rate of increase of population in El

Salvador is among the highest. has led to a concerted government program in family plan. Details of this program will be discussed below in connection with other programs in the Ministry of Health.

a. Birth Rate

While the birth rate in El Salvador has been steadily falling (from 43.0 per 1,000 population in 1975 to 39.0 per 1,000 in 1983), the population growth rate remains high by any standard. (Additional information may be obtained from Table V.) Some 22% of the population is estimated to be under 5 years of age, indicating a population pyramid with a very wide base. (All such data must be understood in relation to the fact that El Salvador has not had a meaningful census since 1971, since the 1981 census was made impossible by the armed conflict throughout much of the country.)

b. Population Growth Rate

As may be seen in Table V, the population growth rate (birth rate minus mortality rate) has been falling with the birth rate. This represents a decline of approximately 25% in the growth rate in the 4 years between 1979-1982. When looked at from this perspective, it could be said that the family planning efforts and other programs in El Salvador are having an effect and that, while the growth rate remains high, the rate of decline is promising. Interestingly, when looked at by region of the country, the growth rate has been falling most rapidly in the Para-Central Region (just east of San Salvador) and most slowly in the Metropolitan Region (where San Salvador is located). The rate of decline in the other provinces (Eastern, Central and Western) is approximately the same. The effect of out-migration, though believed to be significant, could not be assessed during this study.

IV. HEALTH ORGANIZATION IN EL SALVADOR

In this section we will consider the organization of health services in El Salvador, both governmental and non-governmental. Of particular importance due to the current conflict are those organizations which can work throughout the country, such as the International Red Cross. Also to place AID assistance programs in perspective, it is necessary to appreciate other major sources of health funding and technical assistance extended to the Ministry of Health. Key entities involved in this process are the Interamerican Development Bank and the Pan American Health Organzation.

Of equal or greater importance in understanding AID assistance to El Salvador is an understanding of the various health progrms operated by the Government of El Salvador. Primary among these for purposes of this study is the Ministry of Public Health and Social Assistance. In this section we shall consider the organization, manpower, facilities and budget of MSPAS. Only when this structure is understood, do the activities and progrms of the Ministry have a context within which to be evaluated. Just as an understanding of mortality and morbidity data offers a necessary precursor to the recommendations which follow, so does an understanding of health organization in El Salvador.

A. Non-government Health Programs (International)

A host of private volunteer agencies are now working in El Salvador, several of these in the health field. Examples of the many organizations making contributions are Catholic Relief Services and Save the Children. Catholic Relief Services is actively involved in refugee relief, in cooperation with various diocesen groups which operate clinics in La Libertad and elsewhere. Save the Children, consistent with its programs throughout the world, has a program of integrated rural development underway in El Salvador. The focus of a developing Save the Children health program (in rural areas of Cuscatlan and San Salvador) is to change family behavior in ways that will favorably impact the health status of women and children.

While many other groups are involved in refugee and humanitarian work in El Salvador, the three principal groups of concern to this report are those organizations previously mentioned: the International Red Cross, the Interamerican Development Bank and the Pan American Health Organization.

1. International Committee for the Red Cross (ICRC)

The International Committee for the Red Cross states in a brochure that it offers health and protection in an impartial matter to all who suffer in any conflict situation, without distinction whatsoever being given to politics, ideology, religion or other related factors. (16) It manages to fulfill its role of serving both sides of conflict situations by strictly avoiding politics and following the principles of independence inpartiality and neutrality. The ICRC has been following this policy since its founding more than 110 years ago.

Mr. Philippe DeSinner (filling in for the director, Mr. Martin Furher), described the staffing of the Salvadoran branch of the International Committee for the Red Cross as consisting of two teams of workers, one in San Salvador and one in San Miguel. Each team is composed of a physician and several other health-related personnel. Whenever they enter contested territory, ICRC teams are staffed solely by Swiss citizens with no Salvadoran or other nationalities represented. In this way, they feel they are best able to assure their neutrality.

Other work of the ICRC consists of visiting prisoners on both sides of the conflict and of attempting to insure that international covenants for treatment of prisoners are met. In addition, the ICRC provides food relief (95,000 displaced persons assisted in 1983), ambulance services (over one million kilometers covered in 1983), social services (70,730 persons attended in 1983), and blood services (approximately 2,000 donations per year). Above all, the ICRC attempts to promote international human rights through its work in El Salvador, as well as elsewhere in the world. (16)

A companion organization, the Salvadoran Red Cross, works closely with the ICRC, attending to disaster relief, social services and other programs needed by the people of El Salvador. This program is serviced by Salvadoran personel and performs a more typical Red Cross role in the country. While the Salvadoran Red Cross works in conflict zones, it does not enjoy the same immunity as the ICRC.

2. Interamerican Development Bank (BID)

The Interamerican Development Bank is an international organization established in 1959 for the purpose of financing economic growth and social development in Latin America. Its headquarters are in Washington, D.C. It has 43 member nations, including 16 nations outside the Americas. In its 24 years the Bank has invested more than 91 billion dollars in the Americas, with the particular goal of helping improve the quality of life among the population groups with the lowest income in the areas it serves. (17, 18)

In El Salvador BID is represented by Lic. Lucio Paz and has two types of health programs. The first is in the area of preventive medicine and consists of developing potable water sources and latrines. The second is in the area of curative medicine and centers around construction of hospitals, health centers and health units. All programs are carried out in close cooperation with the Ministry of Health and in consultation with the Panamerican Health Organization Field Office in El Salvdor, through which the Bank provides technical assistance to the Ministry.

Between 19[illegible] and the present the bank has made four loans amounting to $36,940,000 for development of a potable water in

San Salvador. During this sa eriod two loans totaling $6,200,000 have been made for ne construction of rural aqueducts. Finally, the bank has given two loans totaling $42,000,000 for improvements to health facilities.

The bank's representatives assert that 90% of its construction goals are being met and that the internal conflict in El Salvador is not blocking project development. There are, however, some problems of maintenance and assessing charges for services resulting from the projects, inasmuch as Ministry of Health officials are often reluctant to go into contested areas for the purpose of levying charges for public services.

According to bank officials, a very large program is currently in the planning stage for the development of water projects in 566 communities to serve 750,000 persons. (See V-A-3-a.) Projects will be in communities with a population of three hundred to two thousand people each. This project will require $23,000,000 to complete.

A program currently underway in the curative services area is a $27,000,000 loan designed to build 93 health posts, 15 health units and 8 health centers. This program is now more than half way toward realizing its goal and is scheduled to terminate in May, 1985. A previous project was responsible for building 11 health ceners, 37 health units and the new regional hospital in San Miguel, designed for 620 beds. (Unfortunately, that facility has not yet been opened because of legal problems between the Government and the hospital's contractors. This matter is discussed further in Section IV-C-3-a below.)

3. Pan American Health Organization (OPS)

The Pan American Health Organization (PAHO) is the official branch of the World Health Organization (WHO) in the Americas. Its own history predates the founding of WHO and the organization has a long history of services to its constituent states. The headquarters are in Washington, D.C., with field units in each of the participating countries and one unit on the border between the United States and Mexico in El Paso, Texas.

PAHO is the instrument by which governments of the Americas come together for the purpose of setting and implementing health policy in the hemisphere. It maintains an active program of scholarship assistance to enable students in the various American countries to study abroad. It also provides information and carries out studies regarding health conditions and programs in the American continent. Periodically it holds meetings at the regional and hemispheric level for purposes of setting new policy directions.

According to Dr. Raul Paredes, Director of the PAHO office in El Salvador, the policy directions for Central America and Panama are summed up in the document "Priority Health Needs in Central

America and Panama." This doc... reports on a ...ting of the Ministers of Health of the Cent... American countries held on March 16, 1984 in which they call upon the governments of the world to fund a massive effort to make real in Central America the goal of "Health for all by the Year 2000." The plan proposes to achieve this through the development of a primary care strategy to extend health and welfare services to the entire population of the area. The document goes on to add that health "should and can be a bridge to understanding, cooperation, solidarity justice and peace." (2)

Each of the aforegoing oranizations is internationally based and plays a major role in the development and operation of health services in El Salvador. The International Red Cross concentrates on direct services to people. The Interamerican Development Bank provides resources for development of a health infrastructure in the country. The Pan American Health Organization offers technical assistance and provides a forum for political and policy decision making regarding the direction of health services in the region. Each of these entities complements the other and serves to strengthen the capacity for health care delivery to the people of El Salvador.

B. Health Delivery Systems in El Salvador (MSPAS, ISSS, ANTEL, Bienestar Magisterial, Sanidad Militar)

The major health system of the Government of El Salvador is the "Ministerio de Salud Publica y Asistencia Social" (MSPAS) or Ministry of Health. MSPAS represents the Government sector in the field of health and reaches out to some 85% of the 5 million plus estimated population in El Salvador. It has a two-fold mission of conventional public health protection and the direct delivery of services at all levels of care. This will be discussed more fully in the following section.

Non-governmental health agencies within the country include the "Instituto Salvadorena del Seguro Social" (ISSS), the largest private health and welfare system in El Salvador. Next in order of persons served is the "Administracion Nacional de Telecomunicaciones" (ANTEL), the program for communication workers in the country. Next in size is "Bienestar Magisterial," the program for primary and secondary school teachers. Finally, with size unknown (for security reasons) comes "Sanidad Militar," the health program for all individuals in the armed services of El Salvador.

MSPAS programs will be described in detail in the following sections. Suffice it to say here that the Ministry has direct service responsibility for approximately 4,200,000 people and is allotted a budget sufficient to provide 40 colones worth of service per person per year. ISSS, on the other hand, serves approximately 217,000 employees and their dependents on a budget which permits the expenditure of 400 colones per person per year. ANTEL and Bienestar Magisterial each have more limited budgets than ISSS on a per capita basis, allowing ANTEL to spend approximately 60 colones per person

per year for its employees and Bienes. Magisterial 100 colones per person per year.

Numerically speaking, the most important of the non-governmental systems to be considered is Social Security. This system was designed for the private, non-governmental worker, although certain governmental workers are covered (those in the eastern and western parts of the country). Of the 15% of the population of El Salvador that is in the money economy, approximately half of these are eligible for coverage from ISSS. Their coverage is provided by a combination of payments from the state, the employer and the employee.

ISSS operates 7 hospitals, including a major hospital in San Salvador, and some 38 health centers around the country. These centers serve the 200,000 plus insured employees already mentioned and approximately 100,000 of their spouses, for a total covered population of about 300,000. Because it is so much better financed than MSPAS, Social Security is fighting to maintain the independence of its health program from those that would impose a unitary health delivery system. One way it is doing this is by seeking a larger target population.

In an effort to expand its base, ISSS is currently considering the possibility of including public employees in the Central and Metropolitan zones among its insured population. (Public employees in the Eastern and Western zones of the country are already included in the Social Security System.) The problem involved in bringing in such a large number of employees (approximately 100,000 persons) is the amount it would cost the state (estimated at 75 million colones per year). Other groups being considered for inclusion in the plan include small businesses, domestic workers and workers in the agriculture and fishing sectors of the economy. Clearly, without a larger constituency, the Social Security System is ill prepared to withstand calls for its integration with the less well financed MSPAS health care delivery system.

C. Ministry of Public Health and Social Assistance (MSPAS)

The focus of this report is on the programs of the Ministry of Public Health and Social Assistance. By definition, MSPAS is the largest and most pervasive health organization in El Salvador. Accordingly, it is important to understand its organization, manpower, facilities and budget.

1. Organization

a. Central

The Ministry of Health is a highly centralized organization with a Minister, a Vice-Minister, a Director General for Health and four major operting units. In addition, there are staff units and specific operating programs that, due to their funding source or size, are somewhat autonomous. Directly under the Minister, Vice-Minister and Director

G. :al for Health are four . .f offices: Internal Audit, Judicial Department, Public Relations Office and Office of Planning for Health Services. The latter, as is indicated by the diagram, is by far the largest and most significant of these offices. It is headed by Dr. Hugo Moran Quijada. Currently this office is developing a five year plan for the Ministry of Health, which will be discussed under Section VII-C below.

In a line relationship to the office of the Minister, through the Director General of Health, are the four major operating agencies of the Ministry. These are: Normative Technical Services, Operational Services, Health Engineering and Administration. Each of these is headed by an individual with major responsibilities for large segments of the Ministry. (See Appendix III for current and proposed organizational charts for the Ministry of Health.)

Normative Technical Services, headed by Dr. Eduardo Navarro Rivas, has responsibility for epidemiology, environmental sanitation, health education, maternal and child health, nursing and dentistry. The concept of this division is that it provides technical supervision and support in certain specialized areas throughout the rest of the Ministry, including the operating units.

Operational Services, headed by Dr. Jose Antonio Pereira, is that section of the Ministry responsible for actual service delivery in terms of direct patient care and certain support services (e.g., laboratory and malaria control). A description of the regional organization within the Operational Services Division may be found in the following section.

The Engineering Division, headed by Ing. Herman Cortez Andrino, has responsibility for technical and non-medical aspects of public health. This includes electrical and mechanical matters, supervision and planning of construction projects, and basic design for facilities needed by the Ministry. (Because this Division is not headed by a physician and has little directly to do with health care, the author of this report had little personal contact with it.)

The fourth Division of the Ministry is the Administrative Section headed by Lic. Jorge Castro. This Division is responsible for maintaining financial control for the Ministry, facilitating program needs of other units, collecting and maintaining information concerning programs operated by the Ministry and the development of new organizational plans for the Ministry. Periodically the directors of each of these Divisions within the Ministry come together with the Minister, Vice-minister and Director General for Health for the purpose of coordinating policy and resolving differences.

In addition to the main operational units noted, the organizational chart lists three other operating programs at the same level as those mentioned. These included PLANSABAR and the VISISA Office. VISISA, which has already been described, is currently playing a major role in recreating and supporting the infrastructure of the Ministry. PLANSABAR, which will be discussed in more detail under Section V, has responsibility for potable water system and latrine construction, largely in rural areas of the country. Each of these offices, in part due to their external funding sources, enjoys some degree of autonomy within the Ministry. (It is currently projected tht both may be incorporated under the "Unidad Ejecutora" division shown on the current organizational chart, as is indicated by the suggested alternatives included in Appendix III.)

It is of some interest that the Minister of Health in El Salvador is traditionally a physician of high standing in the country. It is also a fact that this individual usually is not trained in public health. The current occupant, Dr. Benjamin Valdez H., is an obstetrician-gynecologist. He has, however, taken several courses in public health, including a family planning course sponsored by AID.

The Vice-Minister for Health, Dr. Gonzalo Beltran Castro, has spent twelve years with the Ministry. While a surgeon by training, his background includes service as director of three hospitals, Director General for Health in the Ministry and Medical Director in the Social Security System. The Director General for Health, Dr. Jose Max Molina, has a public health degree. (During his stay in San Salvador, the author had the opportunity to meet with Dr. Valdez on two occasions, Dr. Beltran on two occasions and Dr. Molina on one occasion.)

b. Regional

The Ministry of Health is divided into five geographic regions. These are the "Occidental" (Western), "Central" (Central), "Paracentral" (Paracentral) "Oriental" (Eastern), and "Metropolitana" (Metropolitan). The Western Region consists of three provinces: Ahuachapan, Santa Ana, and Sonsonate. The Central Region consists of Chalatenango and La Libertad. The Paracentral region includes the provinces of Cuscatlan, La Paz, Cabanas, and San Vincente. The Eastern region includes Usulutan, San Miguel, Morazan, and La Union. Finally, the Metropolitan Region includes San Salvador, the nation's capital, and surrounding territory. (See Map of Five Health Regions of El Salvador.)

Since the regions of the country that have been most affected by the conflict are in the northern and eastern parts of the country, several MSPAS service areas are affected. The one least affected is the Western Region, with its regional

headquarters in Santa Ana. At the time of this writing, the Metropolitan Region has been largely sheltered from the conflict, except for the extreme northern portion of the region--and, from time to time, in San Salvador itself, where sporadic violence occurs.

The remaining three health regions are more involved in the conflict due to their encompassing either northern provinces (e.g. Chalatenango in the case of the Central Region and Cabanas in the case of the Paracentral Region) or eastern provinces, which collectively include some of the major zones of conflict. While the headquarters city for the Central Region, Santa Tecla, has been little affected by the conflict due to its proximity to San Salvador, the headquarters for the Paracentral Region, San Vincente, has been the target of much conflict. The same may be said of San Miguel, headquarters for the Eastern Region, although other portions of that region have been much more heavily involved.

Regional directors have considerable authority in their respective regions. All health programs located in those regions fall under their direction. It is interesting to note that in those regions with the greatest degree of security, the directors have the longest incumbancy. However, in those regions that have been most affected by the conflict (Paracentral and Eastern), the directors are either acting or recently appointed.

A major responsibility of the regional directors is the maintenance of equipment and facilities in their regions. This includes vehicle operation and maintenance, as well as support of hospitals and various ambulatory care facilities. In addition, the regional directors have responsibility for assuring operational assistance to the various health units in their regions. Such assistance includes provision of pharmaceuticals, commodities and other supplies needed for operation of the health programs.

2. Manpower

The health manpower situation in El Salvador is being analyzed by another team and will only be mentioned in passing for this report. (See Appendix I.)

a. Physicians

It is currently estimated that there are some 2,800 physicians in El Salvador, of which approximately half were estimated to be working for the Ministry of Health in 1983. (This is out of 1,534 designated positions for physicians.) Some 260 physicians are in their social service year in 1984, a requirement for all graduates of medical schools in El Salvador. The remainder of the physician positions are divided among the other health plans in the country

previously mentioned, the me.. ıl schools and the private sector.

Currently there are five medical schools in the country, four of them in the capital. These include the National University, the Evangelical Unversity, the Albert Masferrera University and the new San Salvador University. Located outside of San Salvador is the Santa Ana Medical School, the smallest of the five. Other than the National University Medical School (which is public) the remaining four were started as a result of the military ocupation of the National University campus subsequent to the invasion of that campus on June 26, 1980. Since these schools did not get underway until 1981-82, they will not have an impact on physician manpower until late in the decade. Appendix VII includes curricula for the National University and Evangelical University Medical Schools. A more complete discussion of medical school curricula as they relate to primary health care may be found under Section VII-B-3-a below.

As is true in virtually all countries, the physicians present in El Salvador are unevenly distributed. Available data indicate the number of physicians per 10,000 persons in the Metropolitan Region to be 6.2 in 1980. This compares to 2.1 and 2.2, respectively, in the Eastern and Paracentral Regions and 2.7 and 3.2, respectively, in the Central and Western Regions. (19) While there appears to be some slight redistribution in favor of rural areas during the period between 1975 and 1980, it is likely that this trend has been reversed with the conflict in outlying regions and that a significant number of physicians have "recentralized" themselves into the Metropolitan Region.

b. Nurses

There are two classes of nurses in El Salvador--the graduate and the nurse auxiliary. There are currently some 1,500 nurses and approximately twice as many nurse auxiliaries functioning in the country. The nurses are trained in three nursing schools operated by the Ministry of Health. Each of these schools also has a training program for nurse auxiliaries. Additional nurse auxiliary training programs are offered in San Vincente and Sonsonate.

In terms of regional norms for numbers of nurses and nurse auxiliaries, El Salvador could be said to be appropriately supplied with nurses, but under-supplied with nurse auxiliaries. While both nurses and nurse auxiliaries are maldistributed in favor of the Metropolitan region, this maldistribution is not nearly so dramatic as in the case of physicians. (For nurses there are some 4.3 per 10,000 population in the Metropolitan Region, compared to a range of 2.2 to 2.7 in the other regions; for nurse auxiliaries the figure is 9.5 in the Metropolitan Region compared to a range .8 to 5.3 in the other ons.)

There is some concern that the number of nurses in training at the present time is substantially larger than the need for graduates in years to come. Consequently, the number of students in nursing schools is being substantially reduced over the next few years to correspond with lower projected future needs. Corresponding increases are projected in other health fields, one of which is the Rural Health Aide.

c. Rural Health Aides

The Rural Health Aide Program is referred to in Spanish as the "Auxiliares Rurales de Salud" (ARS) program. The program was begun in 1976 with the assistance and encouragement of AID. The program is located in the Ministry of Health, which provides training and supervision for the program graduates.

Ideally, applicants for ARS positions are chosen by the communities from which they come. Training has been in four training sites around the country, with an initial training session lasting twelve weeks. This is reinforced through a number of follow-up training experiences, including on-site supervision by program supervisors. (Since Rural Health Aides are required to come to the regional offices to receive their checks each month they have an opportunity for interaction with supervisory personnel on these occasions.)

Of something over 400 Rural Health Aides trained, approximately 250 (estimates ranged from 242 to 258) are currently opeating within the Ministry of Health. (It is thought that certain of the trainees may be in the service of guerrilla forces in the contested zones.) A number of individuals were interviewed at all levels of government concerning the success of this program. In addition, several Rural Health Aides were interviewed when they happened to be present at the time of a site visit. The near unanimous consensus appears to be that the program has been a success and that it should be continued.

A June, 1983 article appearing in the Buletin de la Oficina Sanitaria Panamericana attempted to profile the effectiveness of the new health workers. As a result of questionnaires which were administered in areas where the Rural Health Aides were working, it was noted that the Aides had been active in their communities in terms of patient care at all levels, particularly among women and children. Immunization results were positive, indicating that the Aides had been doing their work effectively. (20) One Private Voluntary Organization informant indicated that Rural Health Aides would benefit from more supervision, indicating that some aides spend as much or more time in their previous occupations as in their health-related work.

d. Human Resource Development and Training

A number of health personnel have not been included in this brief analysis of health manpower in El Salvador. These include dentists, sanitary inspectors, auxiliaries other than nurse auxiliaries, various technicians, therapists, laboratory workers, nutritionists, etc. Responsibility for training many of these personnel comes under the Division of Training and Human Resources in the Ministry of Health, headed by Dr. Rolando Marroquin. (Dr. Marroquin's office is physically located in the College of Nursing, rather than the Ministry of Health.)

In addition to nursing, Dr. Marroquin's division includes sanitary training. Sub-sets of this program include training programs in primary care, empirical midwifery, integrated health and Rural Health Aides. (See above.) Still another program included in the Human Resources Division is that for training "Promotores de Centros Rurales de Nutricion" --Health Promoters for Rural Nutrition Centers. As with the Rural Health Aide program, this program forms a cornerstone of the AID health sector assistance policy in El Salvador. Accordingly, the Human Resources Development and Training Program is extremely important to the future of rural primary care activities in the country.

3. Facilities

Primary attention in this report is on those facilities providing primary care. While outpatient departments of hospitals perform this service for large numbers of people, most field visits (to be described under Section VI-B below) concentrated on health centers, health units, health posts and community posts. Each of these facilities will be described as it is defined by the Ministry of Health.

a. Hospitals

The Ministry of Health operates 14 hospitals throughout the country, five of which are in the Metropolitan Region, with the rest distributed more or less equally throughout the other regions.

By far the largest hospital in the country is Hospital Rosales, the institution in which most of the country's physicians are trained. This is followed in size by the children's hospital, Benjamin Bloom, and the Maternity Hospital, in that order. Also in San Salvador are a psychiatric and pulmonary hospital.

The largest facility outside of San Salvador is the San Juan de Dios Hospital in Santa Ana. Next in size is the San Juan de Dios Hospital in San Miguel. This latter institution is of some interest, in that it has been "replaced" by the

previously referenced new facility financed by the Inter-american Development Bank. As noted, the new facility remains to be opened and the old San Juan de Dios Hospital in San Miguel is generally agreed to be marginally equipped and supplied to carry out its mission.

The only hospital visited in connection with this report was the San Pedro Hospital in Usulutan. Located in the center of a major conflict zone, this hospital has been particularly hard pressed to do its job. Its 266 beds are located in a four-story structure, the top floor of which is regularly without water due to an inadequate water pressure. Further, due to frequent power failures, the elevators often do not work and pesonnel and patients must reach the various floors by stairs. Because the hospital was built by Germans, many parts needed for basic maintenance are unavailable.

The hospital also has suffered a chronic shortage of supplies and replacement equipment. Patient records are kept on the floor in the medical records room, for example, because filing cabinets are lacking. A visit to the radiology department revealed a 50-year old functioning x-ray machine. The laboratory was quite restricted in both equipment and supplies.

In spite of these restrictions, the outpatient department and emergency room of the hospital each see approximately 250 patients per day. A bed occupancy of approximately 75% is maintained. Staffing is by 28 physicians, 17 of whom are permanent and 11 of whom are fulfilling their social service requirements. There are only three specialists serving the entire institution, one ophthalmologist and two pediatricians.

An apparent reason for the inadequate staffing is the unwillingness of physicians to work in this conflict setting. The result is more overwork for those who stay. A limited budget contributes to the problem, with only about $750,000 per year available to operate the hospital, 80% of this going to staff salaries.

To the degree that the San Pedro Hospital in Usulutan is typical of hospitals in the conflict areas of El Salvador, there are obvious problems. Conditions are reportedly little better in San Miguel, San Vicente, and elsewhere in the conflict zones. Conveying supplies to these institutions is particularly difficult, in that land convoys may be interdicted by guerrilla forces. As a result, supplies are usually either not sent or are sent by air. Occasionally, a supply convoy can be sent accompanied by a military escort. Shortages are chronic and severe.

Best Available Document

b. Health Centers

"Health centers" are defiend as facilities with 40 to 80 beds, usually about 75. Typically, they are staffed by 4 to 10 physicians, 10 to 15 nurses, 2 to 3 laboratory technicians, 1 to 2 dentists, 15 to 20 auxiliaries, 3 to 5 sanitary inspectors and 3 secretaries. (21) In essence, they are small hospitals which may have operatories, specialized care units and health-related program functions. Nonetheless, their chief focus is on primary and secondary health care, with limited backup support.

In El Salvador at the present time there are twelve health centers, with at least one in each region and five in the Eastern Region. One of these--Santiago de Maria--provides illustrative information on a health center and its activities. This particular facility has 75 beds and was constructed in 1951. Subsequently, a pediatric unit and surgical unit were added.

Serving a population of 18,000 to 20,000 residents, the health center does a thriving outpatient business with over 100 visits per day on the average. Currently, there are approximately three births per day in the hospital, although this represents a reduction from previous years. Approximately 1,500 colones per month is collected by the health center from its patients. (Social Security pays 8 colones per day for each bed occupied in a special Social Security wing in the hospital, which has its own nursing and physician staff.)

Although few in number, health centers perform a useful function in El Salvador and it is likely that more will be built in the future. While chronically short of supplies and equipment, the health center visited in Santiago de Maria was clean and orderly.

c. Health Units

A "health unit" is defined as a facility staffed by a full-time physician assisted by one to two other full-time doctors, 5 to 10 graduate nurses, 10 to 12 auxiliary nurses, 1 lab technician, 2 to 3 sanitary inspectors, a dentist, a secretary/receptionist, a fee collector and a cleaning person. (21) Generally speaking, these facilities do not have inpatient beds, but concentrate upon ambulatory care. A pharmacy and a laboratory with limited capability are the usual hallmarks of health units. In addition, most health units have a dentist who is fulfilling his or her social service year. Where possible, health units are used to help coordinate the malaria control program and other specialized efforts of the Ministry of Health.

El Salvador currently has 98 health units broadly distributed throughout the country. In this case, there are more health units in the Eastern Region (28) than there are in the Metropolitan Region (23). The Western Region is not far behind, with 21 health units. A large number of health units were visited in conjunction with the site visits and a report on some of these will be included in Section VI-B. Examples include Nejapa in the Metropolitan Region and La Libertad in the Central Region, two facilities which stand in sharp contrast to one another in terms of size and appearance; yet, both classify as health units.

d. Health Posts

The "health post" is the basic building block of the Salvadoran health care delivery system. Health posts are open 5 days a week from early morning until mid-afternoon. They are permanently staffed by auxiliary nurses supported by other personnel. The concept of the health post is that it shall be visited by a physician at least two or three times per week on a regular schedule.

As of 1983, 164 health posts were reported by the MOH to be operational. Roughly one-third of these were in the Eastern Region, and nearly one-fourth each in the Central and Paracentral Regions. Relatively few such health posts exist in the Metropolitan Region.

One such post visited was Porvenir in the Western region. The nurse auxiliary assigned to the post reports seeing 6 to 8 patients daily and the physician (who comes only on Wednesdays) is said to see 30 to 35 patients when there. This particular health auxiliary did not attempt to do physical exams, but left that to the physician. She obviously took great pride in her health post, which was well maintained and better stocked than most of the facilities visited. Interestingly, a malaria team inspector was at the post at the time of the visit and shared some insights concerning that program.

e. Community Posts

A "community post" is similar to a health post, except that it is in an urban area. This is a newer concept and one that remains to be fully incorporated into the life of the Salvadoran health care system. Because of this fact, particular attention is placed on related sanitation projects. On a visit to the Las Palmas community post in an urban "turgurio" (slum) in San Salvador, 3 sanitary workers were noted in front of the clinic. They were cleaning up debris, making a road more passable, and apparently fashioning drainage ditches for the area.

At the Las Pa_ . community .th post may .. found an itinerant staff consisting c a clinic physician, a sanitarian, a nurse auxiliary and a file clerk. The sanitarian described conditions in the area as atrocious and stressed the need for improvement. The facility itself has a family planning room, an oral rehydration room, an immunization room, a treatment room and a small dispensary, all in addition to the physician's office. Records are kept by the clerk in a central waiting area. Available dispensary drugs were quite limited in both number and variety, although the refrigerated cold chain was intact and vaccines present.

Community posts have been encouraged by AID and, as has been stated, represent new thinking for El Salvdor. Unlike health posts, they are not staffed by a permanent auxiliary nurse, but are serviced entirely by a mobile team of health personnel. This is rationalized by the fact they are located in urban areas where other medical care is potentially available during "off hours," whereas in rural areas the only personnel available are those immediately assigned to the Ministry of Health facilities.

4. Budget

a. Internal

One of the best ways of determining the priorities of any organization is to look at its budget. It is also interesting to study the budgetary process, so as to learn how policy decisions are made. Finally, it is useful to compare the budget for any given facility with a similar budget from another facility. Once again, this provides some indication of relative priorities in the institution being studied.

The budget of the Ministry of Health may be found in two documents, the "Ley de Presupuesto General y de Presupuestos Especiales de Instituciones Oficiales Autonomas (22) and Ley de Salarios con Cargo al Fondo General y Fondos Especiales de Instituciones Oficiales Autonomas (23). The former document indicates that the Ministry of Public Health and Social Assistance has an annual budget for 1983 of approximately 200 million colones (50 million dollars). (See Appendix IV.) It is of some interest that the budget line for hospitals is nearly 73 millions colones, while the budget line for non-hospital operational services in the Ministry of Health is 47 million colones. (A number of observers remarked independently that this ratio should be reversed.) The second document outlines all major salaries in the Ministry, including that of the Minister of Health. (This same document offers interesting information concerning the University, including the College of Medicine. This will be addressed in conjunction with a discussion of the medical faculty in Section VIII-C.)

b. Comparative

A favorite activity in the Ministry of Health is to compare its budget with that of the Social Security System, noting the number of individuals served by each system. Given the data previously offered for the Social Security System, it may be established that they see each of their enrolled members on the average of 3.5 times per year. The Ministry of Health, on the other hand, averages only one-half visit per patient per year, assuming it is the sole provider of health care to some 85% of the Salvadoran population.

Other comparative data are less available or less meaningful. For example, no comparison of the military budget with that of civilian agencies was possible, given security involved in the military budget. It was repeatedly reported that the Ministry of Health budget had not been increased for some time and that those programs which were growing were supported with outside assistance. When compared to the University, however, the Ministry of Health is much more dependent for its budget on direct government allocations. The University, of necessity utilizes other potential sources of income (e.g., tuition, grants, endowment) to support its work. This suggests a possible need for the monitoring of the health sector to explore additional sources of revenue which could be raised through patient care activities.

V. MSPAS HEALTH PROGRAMS

For purposes of this report MSPAS health programs and the method by which they are reported are extremely important. Accordingly, this section will look at eight selected health activities within the Ministry of Health and then examine the data reporting system used by most agencies or groups within the Ministry. Given this background, a general report on site visits to all regions of the country will be given.

A. Activities

1. Health Education

The May, 1978 Health Sector Assessment of El Salvador noted that, in the field of health education:

> "The efforts of the Ministry of Health were rendered ineffective by inadequately trained and motivated staff, shortages of materials and equipment...., a lack of scheduling and coordination between health education and other health activities, and the absence of institutionalized programs to involve the community in efforts to improve its general health status." (21)

The report goes on to note that, although most health education activities were separated from other parts of the Ministry, family planning was an exception, in that it was more integrated and more successful than the rest.

A major focus of the 1978 critique was that only a relatively small percentage of the Ministry budget was then devoted to health educaion (0.5% of the total). Apparently at this time the health education division was a dependency of the Administrative Division of the Ministry of Health. Currently, it falls under the Normative Technical Services Division.

Given the short time of the visit to El Salvador, it was impossible to contact directly those involved in health education. From information supplied by MSPAS, however, it is reported that more than one million contacts took place in 1982 which are classified as "health education" activities. This includes nearly 30,000 family planning talks, nearly 150,000 family planning interviews, more than 700,000 other interviews and over 100,000 presentations. Programs of the health education division included radio shows on subjects such as family planning and vaccinations. Teacher training is listed as another major program of the division. (12)

Some conditions that prevailed in 1978 appear to continue. One is that health education is looked upon as an activity of the nurse or nurse auxiliary on the clinic team. Others may discuss health education activities informally or with patients, but not in an organized fashion. In addition, the 1978 report referenced the great shortage of audiovisual equipment. Unfortunately, this

shortage continues. Given the orientation toward health education already present in health centers around the country, an adequate supply of such equipment could prove extremely beneficial to the health education process.

2. Family Planning/Maternal and Child Health

The family planning program falls under the Maternal and Child Health, Nutrition and Family Planning (MCHNFP) Section of the Normative Technical Services Division of the Ministry of Health. Because of its sources of outside funding, this division is somewhat autonomous from other parts of the Ministry. Specifically, 1984 funding for the division includes a United Nations Population Fund Grant of $410,000.

The MCHNFP Section has responsibility for the provision of local and regional programs in the areas of maternal and child health and family planning. A prime goal is training of health workers at all levels, which is carried out in the regions. This includes training both physicians and mid-level health professionals.

According to the interim Director of Family Planning for El Salvador, Dr. Daniel Mendez, there was a considerable decline in the family planning during the period from 1978-81. This was reflected in a parallel decline for all indicators reflecting the use of family planning methods. Since decentralizing the program in 1981, there has been a gradual, but steady, return to the former levels of use of each contraceptive method with particular increases in IUD utilization. The increase in popularity of the IUD may relate, in part, to the use of trained nurses in inserting IUDs, as opposed to relying solely upon physicians, as was done in the past.

In terms of numbers of contraceptive devices distributed, the most popular are condoms. However, of 14,201 sterilizations, only 63 were males. There were 46,271 consultations for women on birth control pills and 30,970 consultations for women using IUDs. Of these, there are presumably some 16,224 active users of birth control pills and 9,011 active users of IUDs. (11) Clearly, El Salvador has a long way to go before the family planning program impacts significantly its population growth problem.

With reference to other maternal and child health activities, 61,735 women were enrolled in prenatal care during 1983, which represents a steady state from the late 1970s to the present. In like manner, there has been slow growth in the number of contacts with children less than two years of age from 1979 (351,049 contacts) to 1983 (391,419 contacts). Both figures represent a substantial increase, however, over the number of contacts for children under two years of age in 1976 (219,903). (11)

It is interesting that virtually all the patients seen in health posts, community posts and health units are women and children. Health education activities in these clinics seem to be focused on children and young mothers. A reasonably effective immunization record supports this impression.

3. Environmental Sanitation

The environmental sanitation program in El Salvador is quite active. It may be considered as having two basic parts: a) construction of rural water and waste disposal projects through PLANSABAR and b) a program of sanitary inspection carried out by public health authorities.

a. PLANSABAR

PLANSABAR is the rural water and sanitation arm of the Ministry of Health. PLANSABAR draws heavily upon funding from the Interamerican Development Bank and, to a lesser degree, from AID. Its primary mission is to construct potable water projects and latrines for rural El Salvador.

During the current five year plan, BID funds will be used to provide water systems for some 300 communities; AID funds for another 115 communities; and still other funds for 165 communities. (The figure for BID contrasts with the 566 rural communities reported to be served by them with the third stage of their aqueduct project for rural areas of the country. This difference results from new design and service considerations.)

AID funds are used primarily to carry out construction in conflict zones. These include water projects in San Vicente, Usulutan, San Miguel, Cabanas, and La Paz. As with other government programs, PLANSABAR officials are advised by the military when they can and cannot enter an area. One of the problems associated with developing projects in the conflict zones is that government agents then find it difficult to collect revenues for use of the completed water projects. These user fees, normally amounting to three to five colones ($ .75 - $1.25) per family per month, help to finance the projects and are quite important to the government.

This partial self-liquidation of project costs through user fees helps to explain the construction of more elaborate projects in El Salvador than elsewhere. Rather than relying upon community wells and fountains where women gather to collect water and do their laundry, Salvadorans prefer individually piped water into their homes. Far more costly to construct, these systems do have the advantage of enabling the government to make user charges for the systems, once constructed. Other reasons advanced to explain Salvadoran preference for network systems include the security factor. People feel safer in their own homes than they do in a

community setting. Currently .s estimated th.. 41% of the rural population is covered by some form of potable water delivery. (See Table VI.)

PLANSABAR has put less focus on latrine construction in recent years. Approximately 30% of the population is currently estimated to be provided with latrines. This represents 870,702 dwelling units. The number of latrines installed in 1980 was 123,571; 10,870 in 1981; 2,870 in 1982; 7,836 in 1983 (24). This decline in the rate of construction of latrines is described by PLANSABAR officials as relating to their relative lack of significance to recipient communities, when compared to potable water projects. The political impact, in short, of latrines is less. AID has programmed $200,000 for latrine construction in the curent year and some funds are programmed out of the third stage of the BID loan to the government of El Salvador.

A major problem facing PLANSABAR is maintenance of facilities and equipment. Special training is required to have a crew available for this purpose. Some 800 plumbers have been trained at the local level with AID assistance. For the future, PLANSABAR has an ambitious schedule of activities. In addition to the third stage of the rural potable water system construction project, a major urban effort is planned for San Salvador. (For additional information concerning PLANSABAR, see References 25 and 26.)

b. Sanitary Inspection Activities

In addition to constructing new facilities through PLANSABAR, the government of El Salvador is actively involved in maintaining the public health through a program of sanitary inspection. Recently the needs of this area have been exacerbated by the growing number of displaced persons situated in controlled settlements. While it often has little direct control over the sanitation of such settings, the government attempts to provide technical assistance and inspection, where possible. These problems will be addressed, in part, by the Health and Jobs for Displaced Families Project sponsored by AID. (A critical review of this program may be found in Reference 27.)

As mentioned previously, each health unit has a sanitary inspector assigned to the staff. Sanitarians visit health posts and community posts and work in the surrounding community. Sanitary aides were found working in the field on site visits. These individuals, working under the direction of sanitarians, have responsibility for removing debris and otherwise improving the sanitary environment of neighborhoods to which they are assigned. Support for the program comes from AID and includes provision of uniforms.

The more conventional function of a public health department—sanitary inspections is performed by sanitarians throughout the country. In 1983, for example, 222,126 homes and 91,058 public service facilities were inspected. (11) Maps are maintained in many of the health units, health posts and community posts indicating the sanitary status of residents in the area. As conditions change, the maps are updated.

4. Immunization

Various references have already been made in this report to immunization activities by MSPAS. One of these is the measles vaccination rate for children between six months and one year of age—41.4% in 1983. (11) The other is the participation of rural health aides in immunization programs—reported to be quite effective. Whatever progress may have been made, the immunization program nationally has been hampered by the conflict, resulting in a lower level of immunization than desired.

Well over one million immunizations were given in 1983. According to Ministry of Health statistics, these include 443,992 for tetanus; 249,357 for diphtheria; 245,115 for tuberculosis; 155,681 for measles; 144,443 for whooping cough; and 143,126 for polio. In addition, there were 5,889 individuals treated for dog bites with rabies vaccine in 1983. (11)

An analysis of the immunization record of MSPAS in the five year interval 1978-82 reveals a general decline in the rate of activity during the period 1980-81 from the preceding two year period, 1978-79. In general, 1982 represented a return toward the highs achieved in 1978 and 1979, although immunization levels had, by then, not quite reached their previous highs. (13) Data from 1983 represent a continuation of this improvement in the immunization rate for the population.

The Epidemiology Section of the Ministry of health has ambitious goals for future immunization programs. These include: a) an 80% immunization rate of DPT-polio-BCG for all children under one year of age; b) a 50% immunization rate for the entire population with tetanus toxoid; and c) an 80% immunization rate for all school children in the first grade with diptheria and tetanus. One reason that the Ministry of Health is focusing on development of a functioning cold chain (with VISISA assistance) is to assure the capability of getting active vaccines to their destination and meeting project goals in this area.

An interesting epidemiologic comparison of vaccinations by year, compared to incidence of the corresponding disease and deaths resulting from that disease, is provided in Table VII. This table simply demonstrates what has long been known in infectious disease prevention. When the preventive measures are relaxed for a disease, the disease rebounds.

Although the table does not show a rise in measles in 1982, final data for that year have been reported elsewhere in this report. This marked increase in incidence could be associated with reduction in immunization in 1980-81. Diptheria immunization levels fell substantially in 1980-81 and cases of diptheria rose dramatically in 1982. Tetanus immunization dropped to 7% of its former level in 1980, followed by a modest rise in cases of tetanus in 1982. Whooping cough immunization levels dropped by a third in 1980 and cases of the disease increased four-fold in 1981. Polio immunization dropped by a third in 1980 and the case rate rose precipitiously in 1980-81. The only disease for which there is not an apparent correlation between vaccination rate and case rate is tuberculosis, for which there was little change in case rate.

5. Rabies and Malaria Control

Whereas all the diseases which the Ministry of Health strives to prevent through programs of health education, environmental facilitation, and immunizations, two deserve special mention at this time: rabies and malaria. Rabies cases are relatively few in number, but their number is growing—with a uniformly fatal outcome. Malaria is a chronic major illness of El Salvador, whose prevalence and distribution continue to demand active control efforts by the Ministry.

During the past year there has been an outbreak of rabies in El Salvador. As of August 15, 1984, 23 human cases had been reported compared to 23 cases for all of 1983 and 12 cases for 1982. As a result, the Ministry has mounted an active program for elimination of stray dogs and vaccination of all dogs having an identified owner. Active campaigns are said to be underway in this regard.

Whereas the human rabies rate is rising, the number of persons bitten by dogs during the four year interval 1980-84 has consistently fallen from 536.26 bites per 100,000 inhabitants in 1982 to 385.30 bites per 100,000 inhabitants in 1983. This trend is continuing into 1984. (11)

The malaria control program in El Salvador began around 1909, but became more clearly defined in the 1940s. In the 1950s an eradication effort was initiated using WHO methods. By 1956 insecticide resistance had appeared to DDT and Dieldrin. The coastal zone was particularly affected with resistant malaria due to the indiscriminate use of insecticides in this area.

A number of programs were tried and failed. These included a mosquito sterilization program, which released over one million sterile mosquitos into the countryside with little effect. When the control program began to focus on breeding places, coupled with the introduction of Chloroprimiquina as a cure in 1981, significant results were seen. The bulk of the malaria control effort is in those areas of the country with the greatest prevalence of the disease.

Most the control of malaria is the voluntary collaborators, of which there are over 2,500 functioning (of 2,700 trained) in the country. Somehow they continue to function, according to informants in the Ministry of Health, although those in the contested zones report less frequently than in the past. Some 400,000 malaria slides are made each year, 80% of which are read in the field.

Actual data on malaria case rate and recent changes in that rate are reported under Section III-B-2-d above. Suffice it to say that the malaria problem in El Salvador is far from finished and that constant control activities are indicated.

6. Medical Consultations

One measurement of the effectiveness of a health care system is in the frequency of consultations which it is able to provide its patients. A comparison between the Social Security System on the one hand and the Ministry of Health on the other has already been made. Social Security provides at least 6 times as many consults per capita served each year as does MSPAS. (See Section IV-B above.)

It is of some interest that there has been little change in the number of consults seen in hospitals between 1978 and 1982. This figure remains stable at just over one million consultations per year. In health posts, on the other hand, there was a near doubling of the number of consultations between 1980 and 1981, with some fall-off in 1982. 1982-82 is a period characterized by a marked increase in hygiene education, along with various nursing services. (13)

Although hospitals did not have an increase in the number of general consults, emergency visits went up sharply in 1981. In some hospitals, such as San Pedro and Usulutan, the emergency visit rate more than doubled between 1980 and 1981. Outpatient department visits, on the other hand, showed only modest increases during this period. (13)

The number of medical consultations offered is of some interest to answering the question: "How effective is the Ministry of Health in providing health services to El Salvador at this time?" A continuing pattern of activity—or one with increases—would suggest that the Ministry maintains a capability of service, at least to some degree. A sharply diminished service rate would indicate a disorganized and ineffective Ministry. While rates do not tell the whole story, it appears that the program goes on, despite the many problems which have been mentioned elsewhere. The Ministry of Health is providing medical consultations much as it has always done and, in some instances, at an increased level.

One caveat which needs to be considered in this analysis is the possibility that MSPAS coverage has never been fully adequate in

rural areas. Thus, a stable or increased rate ambulatory consultations may be more on index a displaced population base (toward MSPAS facilities) than evidence that coverage throughout the country remains more or less constant. This is a subject that merits further exploration.

B. Data Reporting System

As may be seen from the foregoing, a great deal of health data are available in El Salvador. The reason is a commitment and tradition of collecting data and a consistent method of recording it. This is done in various ways, which will be discussed in this section.

1. Commitment and Tradition

There is a long history of rigorous recording of data in El Salvador. The Statistical Section of the Office of Planning within the Ministry of Health is located in its own building and occupies an important role in the life of the Ministry. Reports flow daily into the office from throughout the country and statistics are compiled for distribution in the Ministry. Data are seen by the Director of the Statistical Section as a tool for program planners and not as an end in themselves.

When complimented on the quality and breadth of data avaialble to analyze the health conditions of El Salvador, the Director of the Statistical Section replied that he, like so many others, is "a prophet not without honor, save in his own country." This was confirmed by one observer, who referred to data collection as "a sickness worse than cancer in El Salvador," noting that the problem with data is that it is not used, but simply recorded. Whether this be true or not, the commitment to data collection and recording throughout the Ministry of Health is undeniable.

2. Method

Health related reporting in El Salvador comes basically through two sources, the Epidemiology Section of the Normative Technical Services Division in the Ministry of Health and the Statistical Branch of the Office of Planning for Health Services within the Ministry. (As noted previously, the planning office falls in a staff relationship to the Office of the Minister, Vice Minister and Director General for Health.) The former data sets are used to profile changes in reportable diseases at as frequent intervals as are possible; the latter result in annual reports concerning the Ministry and its programs.

Data are still basically hand tabulated in the Ministry of Health. Computer capability is being installed through the VISISA project, primarily to manage inventories relating to commodity distribution. The computer system being proposed, however, has the capability to handle Ministry data needs at some future time.

3. Epidemiology Reports

Epidemiology reports result from encounter data recorded in the field. Every health provider in El Salvador keeps an encounter sheet on his or her desk at all times while seeing patients. Each patient encounter is recorded by the provider at the time of visit, with notation as to diagnosis and treatment. This information is later compiled within the health posts, health units, etc. (usually in the afternoons) and subsequently forwarded to the Regional Office of the Ministry of Health for that area. These data are, in turn, accumulated and forwarded on to Ministry of Health in San Salvador.

A sample epidemiology report is enclosed as Appendix V. As may be seen, these reports are quite detailed and are published weekly. These reports are used to profile any outbreaks or other unexpected changes in health status as they are detected. Given the care with which data are entered in the field, it may be presumed that these reports are reasonably reliable.

4. Statistical Reports

The term "Statistical Reports" is here used merely to distinguish the annual reports of the Ministry from the weekly epidemiologic reports compiled by the epidemiology division. These annual reports are quite comprehensive in scope and follow a traditional format year after year. The two basic documents, which have been quoted frequently in this study, are the annual Memoria and the annual Salud Publica en Cifras.

The Memoria, the larger document of the two, contains more descriptive information concerning the Ministry and its programs. Basically, every major program is described briefly and selected data are provided to support the narrative report. Given the different publication times of the two documents, the Memoria may contain more recent information than the annual statistical report (Salud Publica en Cifras).

Salud Publica en Cifras (Public Health in Numbers) is basically a series of tables on health status and health organization in El Salvador. Among the most useful of the tables included, because of their comparative value, are those pertaining to the ten most frequent causes of death and the ten most important transmissible diseases. Information on specific diseases is equally helpful. In addition, the report includes a great deal of information on the public health delivery system, including number of visits, facility information, etc.

5. Data System Analysis

As has been previously noted, the method of reporting diseases and related conditions is not necessarily uniform. Incidence rates may be intermixed with proportions. Diagnostic terminology may persist for years, even though its usefulness may be

outmoded. Longitudinal data, com g one year with another, is intermittently used, but would . helpful if it were more available. (Much of the comparative data included in this report results from taking annual reports for several years and combining data contained in each.) In like manner, statistical analysis of data significance is not used, even in those cases where demonstration of change over time could be most useful. Further, graphical representation of data is almost unknown, with total reliance being placed on tabular display of numerical information.

No effort was made to determine the accuracy by which data were compiled, other than to note that the procedure was basically done by hand. The overwhelming impression given by Ministry officials, however, is their commitment to the data gathering and reporting process. When coupled with the diligence demonstrated for recording data in the field, common sense weighs in favor of credibility. Indeed, given other shortcomings in the health care delivery system of El Salvador, their dedication to data gathering and reporting is admirable and inspires confidence in the result.

VI. SITE VISITS

In a sense, everything which preceded the site visits made on this trip was preparatory to those visits. Accordingly, much of the first week of the two spent in El Salvador was dedicated to gathering data at the Ministry of Health and elsewhere in San Salvador. Most of the second week was invested in an intensive series of site visits throughout the country. Certain information obtained from these visits (e.g. descriptions of sample health facilities) has already been presented. The purpose of this section is to outline methodology associated with selection of sites to be visited, to provide brief supplemental descriptions of each region visited, and to offer observations concerning what was found.

A. Methodology

As has been noted under Section II, it was requested in the work order for the present study that unannounced site visits be made. Given the conditions in the country, true country-wide randomization was not possible. It therefore became necessary to design a system which was compatible with both time constraints and safety requirements, while recognizing the limitations of the system chosen.

1. Site Selection

A basic decision was taken at the beginning of the study not to attempt to visit hospitals, except as they became relevant to an understanding of primary care delivery in rural areas. Rather, the focus was to be on the facilities previously described in this report--health centers, health units, health posts and community posts, plus any ancillary primary care programs of an experimental or developmental nature. The first task then became one of getting a list of such facilities in country so that some selection procedure could be applied. This proved to be a more difficult task than had been anticipated.

After some effort, a single copy of a list of all health care facilities in the country was located in the archives of the Ministry. This copy, dated 1982, was being used to update the list of those facilities which were open and those which were closed. Newly constructed facilities were added to the list in a handwritten form and those that were closed due to conflict or otherwise were crossed off. This updating process was underway during the period of study at the Ministry and, according to Ministry officials, was quite accurate.

The procedure chosen for use of this list was first to copy it, then take the copy to each regional headquarters of the Ministry of Health. The Regional Office would always be the first stop in a visit to a region and, if present, the Regional Director would be interviewed at that time. Only at that time was an arbitrary selection of sites made from the list for that region, one or more in each category of facility (except for health centers, due to their larger size). A map would be reviewed to determine if

the sites chosen were accessible [illegible] when the driving distance was too long or the site was clearly [illegible] a contested area and could not be approached by car, a new site would be chosen. There was little possibility of advance notice to the site by the region, since the smaller facilities lacked any kind of telephone communication with the regional headquarters. Further, in-transit decisions were often made to add or delete sites previously chosen, given their proximity or potential for replication of settings previously seen. At no time was this process in the hands of Ministry officials, but rather remained in control of the author.

In the case of the site visit to the Eastern and Parecentral Regions, transportation was by helicopter. This permitted a stop in several areas that would not have been approachable by car, including one that was selected "on the spot" while visiting in the Eastern Region's central office. Other settings were chosen while in the major cities for visitation by car, without prior notification of either those facilities or the larger facilities to which they were satellited. In this manner, a community post, health post and health unit--plus a displaced persons settlement--were visited.

2. Limitations

Clearly, the foregoing procedure lacked scientific assurance of true randomization. As noted, this was a consequence of transportation limitations due to time and safety considerations secondary to the armed conflict in the country. The major loss clearly was in not being able to gain access to those facilities claimed by the Ministry to be open and said by the opponents of the Ministry to be closed. In these cases it was necessary to rely upon reports of numerous health personnel in the field, often out of direct contact with regional officials. By asking the same questions in different ways at the central level, regional level and local level, it became possible to develop a reasonably high degree of security regarding the accuracy of answers obtained on this subject.

In short, the method chosen was not perfect, but satisfied the author concerning its appropriateness to the situation. At no time was there any sense of resistance at any level within the Ministry of Health regarding visits to facilities, either in the conflict zone or outside of that zone. Where visits into certain areas of the conflict zone were interdicted, this interdiction was by U.S. government authorities, presumably on the basis of safety. Ministry officials reported traveling deep into northern and eastern provinces and expressed a willingness to accompany the author to these sites, should the time and inclination be available to do so. At no time was there a sense that any facility or program of the Ministry was "off limits" to an unannounced inspection. Rather, the perception was one of almost total cooperation and support.

B. Description

Detailed accounting of all site visits carried out in conjunction with this report are included as Appendix VI. While representing summary version of conversations only, these daily activity reports provide some basis for evaluating the scope and intensity of the time spent in El Salvador. Further, they offer a more detailed version of individual encounters than can be provided in the body of this report. The following four sections represent four days of field visits to MSPAS facilities.

1. Metropolitan

Visits in the Metropolitan Region included one community health post (Las Palmas, already described under "Facilities" above), a rural nutrition center (El Angel), and two health units (Apopa and Nejapa). An unplanned addition to the schedule that day was a Lutheran displaced persons settlement operated by Lutheran World Service, this being only a few kilometers from Nejapa.

The health unit at Apopa sees something over 100 patients each day. An equivalent number of injections are given. The clinic dentist sees approximately 20 patients per day, mostly for extractions and fillings. The laboratory and pharmacy are both quite busy, the pharmacy dispensing on the average of three or more prescriptions for every patient visit.

At the time of the site visit, a large number of patients were waiting to be seen and all parts of the clinic were quite busy. Some painting was going on and it was explained that this was a contribution of the community to improve the appearance of the clinic, with both paint and labor donated. A random pull of a medical chart showed that on the last visit for the patient in question vital signs were being recorded, symptoms were being noted, a physical exam had been done and diagnosis and treatment rendered. This, coupled with a positive and enthusiastic attitude by the attending physician (a woman) added to the impression of a functioning, productive clinic.

The other health unit visited was equally active. Staffed by an extremely impressive young physician completing his social service year, the Nejapa Health Unit had extensive construction underway. All of this construction, according to the physician, was being provided by local community labor at no charge to the clinic or the Ministry of Health. (Materials for one area of construction--the oral rehydration room--were being supplied by the Ministry.) In addition, the physician demonstrated a new microscope which he stated had just been purchased with community funds, drawing upon the "Patronato" tradition.

A health inspector was present at Nejapa, as was the engineer in charge of environmental sanitation for the Metropolitan Region. This individual, a woman, was extremely impressive and showed great enthusiasm for her work. Of particular interest on this

visit was the issue of the cold chain and how it is maintained in the face of a variable electric supply. (Basically, vaccines and other supplies requring refrigeration were transferred to a local home where the electric supply was more dependable.)

Located in the Guazapa district described in Dr. Charles Clements' book on Witness to War—An American Doctor in El Salvador, the Nejapa clinic had been under siege by rebel forces two years previously. (28) The staff described with great intensity what it was like to be "pinned down" by crossfire between the army and the rebels for a period of several hours. Discussion of this incident led to mention of a Lutheran displaced persons settlement in the vicinity, which we visited. This settlement then housed 675 individuals, including nearly 500 children and stood as a symbol of one of the major problems facing El Salvador today--dislocated persons.

The rural nutrition center at El Angel was of particular interest, given the larger facilities visited that day. The center consisted of nothing more than a small open building with about 60 children, 2 attendants (one a Rural Health Aide) and 2 cooks. Lunch was being prepared and the children, all preschoolers, were lined up having their hands washed prior to eating. Powdered milk, beans and cornmeal were the staple foods in storage with the lunch for that day supplemented by noodles made with cottage cheese. The rest of the lunch was made up of tortillas and refried beans, with no evidence of vegetables.

As noted, the visit to the Las Palmas community post has already been described. Other facilities visited in the Metropolitan Region included a very large health unit located adjacent to the regional headquarters. Also at that location was the storage warehouse for the region, a well organized and apparently well stocked facility from which supplies were sent throughout the region.

2. Western

Upon meeting with the Regional Director in Santa Ana, several sites were requested to be included in the visits for that day. The first was the community post, La Fuerteza, in Santa Ana; the second was a rural health post, El Provenir; and the third was a health unit, El Congo. When it was suggested by the Regional Director that a rural nutrition center might be included in the itinerary, this offer was accepted.

The community post at La Fuerteza was extremely busy when visited. Thirty or forty patients were waiting to be seen. The physician in attendance, a woman, led a tour of the clinic, which was located in a community building. The physician stated that the clinic was "falling down," so services had been moved to the community center. Specific rooms had been set aside in the community center for a dispensary and patient examining room. (It is of interest that the doctor in attendance had been a

vice-presidential candidate in recent elections, garnering some 7% of the national vote.)

The next visit was to the Porvenir health post, accessible only over extremely rough roads. The nurse auxiliary, who staffs the clinic, was present with one patient waiting. She noted that the physician only comes one day a week, on Wednesdays, when there are some thirty to thirty-five patients to be seen. On other days, she will see six to eight patients.

The clinic was extremely clean and well maintained. This was one of the few sites visited that seemed to be relatively well stocked with vaccines and other supplies. The nurse auxiliary had three boxes of file cards on her desk, one listing maternal and child health patients; one keeping a record of vaccinations; and one devoted to nutrition records. Patient charts are kept by a secretary. When asked about family planning records, for example, the nurse auxiliary stated that she had eight patients on birth control pills, five with IUDs and ten who had undergone tubal ligations. Health education for family planning is given during the prenatal period. However, when asked about average family size in the community, she responded that "nine children" is about average. (Actual total family size in rural areas is estimated at 8.4.)

The next visit, to the rural nutrition center, Canton Primavera, demonstrated a program not unlike that seen at El Angel. The difference was that the coordinator of the center was an older woman from the community rather than a Rural Health Aide. Further, she had brought together a full supply of herbs and vegetables to complement the staples being served to the thirty-five or so preschool children being maintained at the center. A mother-volunteer and two cooks also were working at the center with a coordinator. Rice, cooking oil, beans and cornmeal were found in the storage area.

The final visit of the day was to the health unit El Congo. This facility, built with Alliance for Progress funds in the 1960s was somewhat cavernous and dark compared to other clinics visited (as noted under VI-C-1 below). The evolution of facility design in El Salvador has been, for the most part, a significant step forward.

The physician at El Congo stated that she sees twenty to thirty patients per day, most of whom are pediatric or gynecologic. When asked about the relative ratio of male to female patients, she stated that of every thirty-nine patients seen, only two will be men. the El Congo health unit has neither x-ray nor laboratory facilities and is staffed by two nurse auxiliaries and two graduate nurses as well as a physician. A dentist comes three days a week and sees ten to twelve patients per day.

A sanitary inspector was at the clinic sitting in a darkened room when seen. He shared a faded map of homes in the community which

showed little evidence of having been changed over the past several years. When asked about local support through a "Patronato" or otherwise, the staff responded that there was very little. In short, this clinic was disappointing in terms of both physical appearance and the orientation of its personnel. As such it provided a contrast to some of the other facilities seen.

3. Central

As noted previously, the Central Region encompasses one province deeply involved in the conflict (Chalatenango) and another which is considered more secure (La Libertad). Given the policy of limiting land visits to those areas approved by the United States Embassy, site selection was therefore confined to La Libertad.

While meeting with the Regional Director for the Central Region, a site visit schedule was suggested to include the health units at Zaragoza and La Libertad as well as a new health post in Mizata. It was agreed that, time permitting, a visit to the health unit at Lourdes would be added to this schedule. (As in certain other instances, this site was chosen simply because of its name—a familiar one.)

The health unit at Zaragoza was, in effect, a health post which had been defined as a health unit because it had a full time physician. The facility itself was the size of a health post. The physician there, a woman, sees approximately thirty-four patients per day. Diagnoses here are compatible with those reported in other clinics visited: diarrhea, bronchitis, rabies and a variety of intestinal parasites.

A particularly impressive feature concerning the design of this clinic is an open air covered waiting area just outside the main waiting room. In addition, the clinic maintains a model garden planted for the purpose of encouraging patients to improve their nutritional status. An actual cooking demonstration was underway at the time of the site visit showing how to make a nutritious meal by mixing carrots with rice and cooking oil.

At the much larger La Libertad health unit there are several physicians who manage to keep the clinic staffed during the entire day (but not at night). The La Libertad facility is an Alliance for Progress clinic built in 1966. Like the other clinics built during this period, the examining rooms are oversized, the waiting rooms undersized, and the entire facility poorly lit. The clinic itself has a reasonably well equipped laboratory, a pharmacy that was essentially devoid of medications, a dental laboratory and a food storage area for pregnant women and malnourished children. The physicians at La Libertad health unit report seeing about 125 patients daily, with another twenty-five to forty patients seen by the dentist.

As with many of the clinics visited, the La Libertad Health unit collects two colones per visit from most patients. They

currently have ab. 900 colo. in their "Patronato" fund, having used a major portion recent. to fix an autoclave and to buy medicines for control of venereal diseases. (Being a port city, there is a subsantial amount of venereal disease in La Libertad.) The attending physician reported that for any purchase over 100 colones, even though it came from funds generated from the clinic, permission was required from the Regional Office.

The next clinic visited was the health post of Santa Maria Mizata. This clinic is of the most recent design being used by the Ministry in conjunction with the BID health facility construction program. In many respects it is similar to the clinic at Zaragoza, but lacks an outside porch. All of these clinics built within the last ten years are quite open and light with larger waiting areas and smaller examining rooms than those constructed during the Alliance for Progress era.

The doctor, fulfilling his social service year, sees about thirty patients per day. The vast preponderance of patients seen in this particular clinic over the previous six months had been seen for diarrhea and intestinal parasites (approximately 300 each), with influenza being the next most common diagnosis (32 cases).

The Mizata health post requests one colon per visit and another colon for medications. The collection rate is reported to be quite high. Because there is no judicial authority living in the town and one is required in order to form a "Patronato," no such organization exists. In spite of this, the clinic reportedly receives donations from some of the wealthier individuals who live along the beach and are served by it.

The final site visited was the health unit at Lourdes. Due to the late hour of arrival, the clinic was being closed and the physician had left. It was possible to talk with the nurse and visit the clinic, which was quite impressive. Several student nurses were at work in the clinic and the food storage area was well stocked. As elsewhere, the pharmacy was quite limited. The Lourdes clinic had a beautiful garden surrounding it and generally gave the impression of being an efficient and well functioning facility.

4. Eastern and Paracentral

Due to the fact that the Eastern and Paracentral Regions are in the heart of the conflict zone, visits to sites in these regions were made by a combination of helicopter and land vehicle. The helicopter had the advantage of enabling site visitors to arrive quickly over a widely dispersed geographic area and, on at least one occasion, to arrive at a rural site without previous notice. The helicopter was provided by AID and permission was given to go to all sites requested except for one--San Francisco Gotera. (The reason given for denying approval to visit this site was that shots had recently been taken at aircraft in the area.)

The last site visited in the Eastern Region was the Usulutan Hospital, which has been described previously. While at the hospital, a request was made to visit the community post Colonia Molina. This was agreed to by the hospital director and an unannounced visit was made to this, the only such site operating in Usulutan.

The Colonia Molina health post was operating out of a converted garage and was staffed by an auxiliary nurse and an aide. The auxiliary nurse was quite enthusiastic about her work and obviously took it seriously. She was systematically seeing some thirty to forty patients, mostly women and children. When asked what physician backup she had, she responded that no physician had attended the clinic for the past two years. (This is despite the fact that a "community post" is defined as an institution that has physician visits at least once weekly and usually two to three times per week.)

This clinic was in marginal condition physically. Not unlike the Usulutan Hospital itself, there seemed to be a shortage of virtually everything. There was limited privacy for patient examinations and little security for supplies. Diagnosis is largely by history taking, although cursory abdominal and throat examinations are made. Contributions of one colon per visit are received.

The next visit grew out of conversation with the acting regional director in San Miguel. A request was made to visit the health unit at Moncagua, simply due to its proximity to San Miguel and to the fact that the area was considered secure. Arrangements were also made to stop by a displaced persons center near Moncagua. This particular settlement is heavily financed by AID.

While the purpose of this section is to describe visits to health facilities, the displaced persons center is of some interest. Eight hundred or so people were housed in a variety of buildings hastily constructed for the purpose of receiving them. The latest construction was walls and ceilings made of corrugated iron, with little light and ventilation. (Older shelters in the same displaced persons settlement consist of various forms of vegetation, cardboard and tin for protection from the weather and are less enclosed than the recently constructed facilities.)

Life in the displaced persons center seemed somewhat disorganized and without a great deal of purpose. Children were playing in a nearby stream while women washed in the same water. Men generally were lounging about the settlement with little apparent purpose or activity. Staff at the center and certain of the displaced persons were involved in cooking and distribution of food. Latrines and water sources were available at various locations in the settlement.

Two of the families present, when questioned, responded that they had been brought by truck from the Honduran border. They

expressed no particular desire to be in the displaced persons settlement and stated they would prefer to be in their own homes. One family interviewed stated they had come from Honduras.

Health services for the displaced persons are provided at the Moncagua Health Unit. The physician was not present at the unit, but the head nurse, who was introduced as the assistant director, was. She was extremely gracious, intelligent and enthusiastic about her work. Being a true health unit, the Moncagua Clinic is staffed by more than one full-time physician and has a full complement of support personnel.

The facility itself is of an open construction, typical of those units built in the mid- to late 1970s. Individual rooms are set aside for family planning, health education, sanitation, vaccinations, etc. As with most health units, the Moncagua Health Unit offers pharmaceutical, dentistry and laboratory services. In general, the atmosphere was one of cleanliness and orderliness, leaving a most favorable impression.

The next visit was to the health center at Santiago de Maria, which has already been described under IV-C-3-b above. An extensive conversation with the newly appointed regional Director in San Vicente replaced actual visits to sites in that area. The Regional Director reported that fifty-six service centers are currently operating in the region, but that guerrilla action is draining off resources. He described a particular problem with vehicles, all of which are quite old and badly in need of maintenance and replacement. The operating budget was described as inadequate.

This report was not unlike those received from other regional directors in El Salvador. All were quite candid about their problems, hopeful that some assistance could be provided by AID.

C. Observations

A number of observations may be made based upon the visits described in Section VI-B above. These observations are a synthesis of reports by clinic and regional staff, as well as a compilation of what was actually seen in the field.

1. Facilities/Equipment

As indicated in the descriptions of site visits, health facilities in the country are quite variable. Those built from the mid-1970s to the present are generally adequate in terms of physical design, but are almost uniformly lacking in needed drugs and other supplies. Equipment is also inadequate and often lacking.

Whe. :he programs seem to be ıg best is where a local "Patronato" or other voluntary sys..ı is at work. When patient "contributions" can be combined with voluntary donations, the clinics can be elevated to a reasonably high status of performance. When there is total dependency upon government resources, the clinics tend to be dingy, under-equipped, under-supplied and poorly run. Community participation appears to be a key difference in distinguishing successful from unsuccessful clinics.

The incongruity of the newly constructed, but unopened hospital in San Miguel and its totally inadequate predecessor continues to be a matter of embarrassment for all concerned. Fortunately, such administrative snafus seem to be limited in number, yet the visibility of this situation more than overshadows reasonable performance elsewhere. One newly constructed health post was noted on the coastal road north of Mizata that had never been opened. A regional director reported that it was poorly planned, given its proximity to the Mizata health post, and probably would not be opened for some time. With such isolated exceptions, all the facilities visited seemed to be fully used and appropriately located.

2. Staffing/Personnel

It became apparent that clinics are defined by the number of personnel which attend them, rather than by the size of the physical facility. An example is the health unit which is a health post by design, but a "health unit" due to the fact that it is attended by a full-time physician. Health units, in particular, display a wide range of service delivery and cover a wide spectrum of size and apparent quality. Once again, this appears to be more than anything a function of the staffing in these facilities.

Urban community posts are more likely to be staffed by permanent physicians residing in the area, whereas rural health posts and health units tend to be attended by physicians doing their social service year. (This is quite variable and is based only on limited observation.) Physicians who become involved in their community and encourage participation seem to have more success than those who simply care for patients and leave. This sense of identification and involvement seemed to be present with both permanent physicians and those serving their social service year and is not a necessary characteristic of either.

While the opportunity for meaningful observation was limited by time and travel constraints, it became apparent that there are substantial staffing and personnel problems in the areas of conflict. This was highlighted by the problems in the Paracentral and Eastern Regions, where many trained physicians seemed to have left and only a limited number (particularly specialists) remain. Nurses, nurse auxiliaries and various support personnel appeared to be maintaining their

resp sibilities, to a large de but are severely limited by a shortage of transportation, supp s and equipment—as well as physician backup support.

A general observation concerning health personnel in El Salvador is that they appear to be well trained and basically well motivated for their work. Despite enormous odds against them, these personnel continue working and carrying for patients. It is clear that there is an organized health care delivery system in El Salvador and that a large number of dedicated and trained individuals are working within this system, albeit under severe constraints.

3. Data Collection

As has been pointed out in Section V-B above, the Salvadoran health care system is heavily oriented toward data collection and reporting. This was confirmed time and time again in the field, where virtually every provider seen had an encounter form in his or her desk and could recite a list of all patients seen that day, with diagnosis and treatment. There is no reason to believe that this data is any more or less accurate than the diagnosis behind it and without doubt represents an honest effort by the Salvadoran Ministry of Health to provide a detailed analysis of its operations.

As has already been indicated, there might be an overindulgence of time spent on data compilation at the local level. This may get in the way of effective patient care, particularly when afternoons are set aside for this purpose at the expense of patient care. Some mechanism needs to be found to continue serious data collection, but not to interfere with the relationship between providers and patients in the process. Finally, to deal with criticisms that data collection is the "cemetery" of the El Salvador Health care delivery system, every effort needs to be made to assure that such data have utility to both provider and program manager.

VII. MSPAS HEAL.. PRIORITIES AN SOURCES

Fundamental to any recommendations regarding the health care system in El Salvador is an understanding of health priorities and resource allocation, as articulated and practiced by the Ministry of Health. In addition, if long range suggestions are to be offered, it is vital to understand the five year plan of the Ministry of Health and to place recommendations in the context of this plan. In the following three sections these issues will be addressed.

A. Health Priorities

1. Reported

Almost without exception every health provider seen in El Salvador commented upon the shortage of supplies and equipment needed to carry out his or her mission. These observations were offered quite spontaneously at all levels and with heartfelt concern. With more support in this area, health providers generally appear assured that they can do the job at hand.

Only after supplies and equipment problems were addressed did providers mention facilities. While a number of facilities were clearly inadequate and require improvement, this appears not to be the primary problem in El Salvador at the present time. Particularly given the continuing support of BID for construction of various health facilities, the need for new and improved facilities does not appear to be a priority need relative to other areas requiring attention.

With reference to specific diseases, all observers seem to agree that the greatest problem lies with diarrhea and intestinal illnesses. This, coupled with dehydration in children, is responsible for a large part of the infant mortality rate in El Salvador. Programs designed to deal with the diarrheal diseases, including potable water, latrine construction, adequate nutrition, and administration of antiparasitic medication were all approved as necessary ways of meeting this problem.

Other problem areas mentioned were in the general area of maternal and child health, including the need for improved immunization of children, care for pregnant women and medical care when needed. All seemed to agree that higher immunization levels and improved sanitation were basic elements in correcting these difficulties. In particular, health education was repeatedly stressed as an important component of improved health status in El Salvador.

2. Observed

A problem which appears to impact all of the health problems reported in El Salvador is the continuing conflict between government and guerrilla forces. This conflict intrudes into every aspect of the health care system, not the least of which is

the insecurity of [illegible]ch personn[illegible]o must work in the conflict zones. As has been indicated unc[illegible] the section on site visits, professional support has been severely debilitated in the Eastern and Paracentral Regions due to this conflict situation.

Paradoxically, it would appear that there is little evidence of harm having befallen Ministry of Health personnel. Several observers went out of their way to assert that guerrilla forces will not intentionally harm health personnel working for the Ministry of Health. (Several "accidents" were reported, where health personnel have been killed inadvertently as part of larger groups, but not while representing the Ministry of Health.) Nonetheless, kidnappings and forced service in guerilla-held areas are unattractive to providers and tend to discourage participation in guerrilla dominated areas. Further, raids on government health facilities which remove all supplies and equipment exacerbate an already difficult situation to the point that providers become discouraged and are not likely to return to these sites or, if they return, to go infrequently and with few of the necessary supports to deliver health care.

The central priority facing all health providers in El Salvador, although not always articulated as such, is cessation of the current hostilities. Should these hostilities come to an end, the health care delivery system could focus on what it does best—taking care of people. While the hostilities continue, the health care system will be variously disrupted and debilitated.

B. Resource Allocation

1. Present

As noted in the discussion of budget (Section IV-C-4), there is a relative disparity of resource allocation toward hospital and highly specialized medical care. While larger hospital facilities in El Salvador within the MSPAS system hardly represent an over-allocation of funds, the Ministry's budget appears unbalanced in favor of these institutions vis-a-vis the facilities featured in this report. In truth, all health facilities in El Salvador appear to be severely shortchanged in terms of funding and are victims of the economic and political crisis being faced by the country.

The larger issue of resource allocation is one of social services versus military; it is a matter of resource allocation to the many from the few. Salvador historically has been accused of being the preserve of fourteen very rich families to the detriment of the rest of the population. While this sociological observation has been roundly challenged, it is generally conceded that economic disparities in El Salvador are large even for Latin America. This is presumably a major reason for the present conflict. The conflict itself, due to the military requirements which it has engendered, has further bled scarce resources from

social programs to the military. result is that very little remains for the kinds of program. sponsored by the Ministry of Health and other social programs (e.g., education).

2. Potential

Land reform appears to be a meaningful concept in El Salvador. A number of representatives of the oligarchy complained that their land had been expropriated without compensation. Dispassionate observers reported that all land holdings of 250 acres or more had been seized and were currently being operated as cooperatives. Proponents of reform noted that while production had temporarily declined following these takeovers, it now is beginning to rise to the previous levels. In short, land reform seems to be a reality in El Salvador and there are some indications that it is working. This could lead to resource reallocation for the country.

The greatest potential for resource allocation lies in finding a just settlement to the current conflict. If this can be achieved, the source of certain problems can be reduced (e.g. homicides) and others can be attacked more effectively (e.g. diarrheas through potable water systems, latrines, etc.). With the cessation of conflict the potential exists for substantial improvement in health care in El Salvador. This assumes that there will not be a concurrent reversion to the economic disparities which have existed in the past, and to some extent, continue to exist.

The direct potential for health is incorporated on a new Five Year Plan being considered by the Ministry of Health. The plan acknowledges health for all by the year 2000 and affirms its goal as the goal of the government of El Salvador. While there has always been a focus in the Ministry of Health on delivery of primary health services at the local level, the budget has emphasized more specialized hospital care. (See Section IV-C-4.) According to the five year plan, this relative imbalance in favor of secondary and teritary care should be redressed to favor primary care. If this occurs, MSPAS will be responding to the "health for all" theme.

C. Five Year Plan (1985-89)

1. Content

The five year plan for the Ministry of Health, entitled Direccion de Planificacion de Los Servicios de Salud, was released in August, 1984 for the purpose of debate and discussion within the Ministry of Health. This plan, produced by the Office of Planning, headed by Dr. Hugo Moran Quijada, is in six parts. These are:

1. The historical structure of the health situation in El Salvador;

2. The current hea... situation . Salvador;

3. Factors contributing to the health situation in El Salvador;

4. Programmatic coverage through 1983;

5. Health System of El Salvador; and

6. Bases for a health policy in the upcoming five years.

The document then goes into the actual plan and continues with a discussion of a proposed reorganization of the Ministry of Health in order to meet the plan. The proposal has two terminal sections, one on human resources and the other a brief analysis of the fiscal resources of the Ministry and projections for the future.

The initial section of the plan reminds the reader of the hopes and aspirations of the Salvadoran people, as well as the guarantees to be found in the Constitution of 1983. It then contrasts these noble objectives with the present reality. The plan cites the

> "political-theologic superstructure directed by a small minority that has maintained all power concentrated in it's hands and whose interests are not the same as the great majority of the Salvadoran people, but contradict the interests of the majority," as the cause of the current explosive crisis in El Salvador. (29)

The plan continues with a series of questions, such as:

> "What value is freedom of the press when no one knows how to read or write and lacks the money in order to buy space in a newspaper?"
>
> "Of what value is freedom of education if one does not have money in order to pay the tuition required to meet the uncontrollable cost spiral of the country's high schools?" (29)

The report goes on to conclude that Salvadorans cannot call health a right, either constitutional or natural, because it is not available to everyone. Rather it is a privilege and an object of luxury. This is demonstrated by the health statistics previously quoted and the fact that the Ministry of Health is only able to offer 0.6 consultations with the medical system per person per year. Additional data are presented to support this claim.

Socioeconomic data are then presented to show the desperate situation in which many people live. Environmental health data are further used to buttress the argument. This is coupled with observations concerning the immunization rate and the budget

expended for health care. It is concluded that what is required is to structure a national system of health for El Salvador.

Only then, say the introductory sections of the report, will it be possible to arrive at "Health for All by the Year 2000;" only then will it be possible for El Salvador to arrive at its definitive liberation.

The actual health plan calls for the bringing together of health policy in El Salvador with that of global health policy designed to promote economic growth and social development. This health policy must be based upon community participation and must follow an integrated medical policy to assure health care for all Salvadorans when and where needed from birth to death. Basic to this process will be health education, environmental sanitation and control of transmissible diseases.

The plan calls for coordination with various other agencies in El Salvador to create a national health system which would have a strong evaluation component. A diagrammatic one-page presentation of the plan is included as Table VIII. It will be noted that this contains two basic elements: primary medical care and health education. These are related to three overriding priorities: the environment (sanitation and nutrition); integrated medical care (epidemiology and medical attention); and resource growth (investments).

The plan goes on to suggest certain changes in the Ministry. These include: 1) improving the administrative process so it is more responsive to the health priorities of the Ministry; 2) changing the attitudes of the participants (i.e. employees); 3) revising the organizational structure; and 4) streamlining the methods of operation to improve efficiency and productivity in the use of scarce resources.

The plan then goes on to make some observations concerning current distribution of resources. It notes that 23.43% of the people live in the Metropolitan Region, yet these same people consume 38.07% of the human resources. By the same token, the Paracentral and Oriental regions have 16.56% and 27.32% of the population, yet have only 11.86% and 20.39%, respectively, of the human resources available in country. The result is, quite obviously, that the Metropolitan Region draws resources disproportionately from the most remote and troubled regions within the country. (29)

2. Reaction

Clearly, this is not a timid plan. It speaks forcibly to the abuses and problems of the past and plans imaginatively for the possibilities in the future. Equally clearly, the plan must prove disturbing to those who read it who are established within the Ministry. There is implied criticism of all that has gone before and a veiled threat to disrupt positions and alter organizational relationships. The plan is not neutral.

Reac n to it was varied, but p inantly critical, from those contacted in the Ministry. At lea one formal alternative has been suggested, with sections relating to the diagnosis of the current situation, objectives, policies and minimal goals. This written plan is accompanied by a suggested reorganization of the Ministry to achieve its goals. Indeed, entirely new organizational charts are presented in support of this objective.

The alternative plan continues with a series of specific strategies and priorities. These include participation by all the population in their own health care and a statement concerning the importance of an integrated approach to health care. Priority is given to women, children, workers, the aged and the handicapped, with particular emphasis on nutrition, dental health, prevention of accidents, and mental health. A series of environmental health measures was suggested, including potable water and control of wastes. Finally, the alternative proposal stresses prevention and control of illnesses such as malaria, and other infectious and parasitic diseases.

Other respondents in the Ministry simply noted that this was one plan among many—that they had seen plans come and go through the years. The first of these referenced—a plan said to be much more comprehensive in scope and detailed in analysis than the present one—was written in the 1960s. There appears to be some resentment by those who have been in the Ministry at the criticism levied by the current plan at past practices.

This reaction was not universal. At least one senior individual in the Ministry strongly supported the plan, said it is exactly what has been needed and wished it the greatest success. This individual felt that the Ministry was traditionally apathetic and slow to respond to change. He felt that the plan would make this change possible for the first time.

3. Analysis

A primary observation concerning the 1985-89 plan is its willingness to confront perceived injustice and boldly state the consequences of inaction. Few government documents are as uniformly critical of past government policy as is this plan. Few are as revolutionary in tone or in scope.

A key element of the plan is to be found in the phrase "a single health system." Subsequent versions of the plan have changed this to a "national health system." Whatever the wording, the original intent is clear—that is, to bring about the unification of the various health plans currently in existence in El Salvador. This is for the purpose of decreasing economic disparities and promoting social justice.

If the plan has deficiencies, they are to be found in two areas. After a bold beginning, it fails to sharpen its focus on what needs to be done. That is to , it offers a breadbasket of

responses, all of which are important, without narrowing down the alternatives. (This is equally true of the alternative plan.) While all of the objectives and proposals stated are laudable, it is unlikely that the Ministry of Health will have the resources to meet each one of these. Accordingly, a fully developed plan should prioritize from among desirable alteratives.

A related deficiency is the failure of the plan to make budgetary recommendations that correspond to its goals. If the Ministry of Health is to serve as a beacon for social change, it must have the courage to reorganize its own fiscal priorities to reflect a commitment to change. As indicated elsewhere in this report, that may not necessarily mean reduction in resources for a particular sector, but it does mean emphasis on or increases in some sectors and not others. A fully developed plan must include such budgetary recommendations if it is to be credible.

In short, the five year plan currently under consideration by MSPAS is an imaginative document that critically reviews the past and boldly projects the future. It has aroused serious opposition within the Ministry and is likely to be revised before finding approval. In that process of revision, consideration should be given to clarifying priorities and making clear budgetary recommendations in accord with these priorities.

VIII. RECOMMENDATIONS

The present section is strictly a result of the author's visit to El Salvador and is based upon reading and interviews carried out in conjunction with this trip. No preconceptions were brought to the assignment and no attempt is made to tell the Ministry of Health or Government of El Salvador what their health policy should be. Rather, all recommendations are based on the more effective implementation of current and projected MSPAS and GOES policies, or understood. Primary attention is focused upon future directions for the AID/El Salvador Health program, inasmuch as this was the principal reason for the visit. Because the initiating concern resulting in the visit was the present AID VISISA Project, this project will be addressed briefly. Further, although there was no request for an opinion on this subject, there will be a short discussion of grants versus loans in programs such as those recommended. Finally, the question of follow-up visits will be addressed.

A. Current Programs

It is important to reiterate that the purpose of this consultation was not to evaluate VISISA or other programs currently being funded by AID/El Salvador. However, given the concern expressed about VISISA, it is worthwhile to review the stated purposes of this program in relation to the reported and observed health priorities of those interviewed in El Salvador. (See Section VII-A.)

It will be recalled that the problems health workers most frequently encounter in the field are a chronic shortage of supplies and equipment. While concerns were also expressed about lack of personnel, inadequacy of facilities, etc., the supplies and equipment shortage issue was by far the most prevalent noted by those individuals interviewed. In addition, the problem of maintaining, as well as replacing, existing equipment was repeatedly referenced.

The objectives of the AID/El Salvador VISISA Project are precisely targeted to correct these deficiencies. Portions of the program may be characterized as "quick fixes," designed to ease the impact of immediate shortages. Such is the case where drugs and other commodities are concerned. Thus, while an immediate need is being met, the question must be asked concerning what will be done when the commodity replacement program terminates. It appears evident at present that the El Salvador government is not allocating sufficient resources to the Ministry of Health to enable it to correct the problem by itself.

A more lasting dimension of AID/El Salvador assistance being carried out as part of VISISA is that relating to infrastructure development through medical equipment repair, vehicle replacement, and emergency medical services capacitation. PLANSABAR officials observed that at one time there were very few engineers capable of maintaining the water systems being established through BID assistance. Now, apparently, AID has been successful in training teams of individuals capable of doing so. The VISISA Project is also concentrating on the training of individuals capable of maintaining the various kinds of equipment used in MSPAS clinics and hospitals.

The importance of developing increased capacity in this area within El Salvador cannot be overstated. Because equipment often must be used for extended periods of time (such as a 50 year old Pickering X-ray machine still in use at the San Juan de Dios Hospital in Usulutan), the need for maintenance and upkeep is of extreme importance. Equipment may have to be abandoned (as in the case of a battery powered x-ray unit at the Santiago de Maria Health Center) when replacement parts are unavailable. Backup equipment is often absent and the service dependent upon the original equipment must be terminated.

Nowhere is the dimension of the equipment replacement problem more visible than in the case of MSPAS motor vehicles. Repeatedly we were told that the only vehicles available averaged 20 or more years in age and were literally "held together" by creative maintenance crews. A number of other vehicles have fallen into the hands of rebels or been destroyed. (Five vehicles of the malaria control program were bombed in San Salvador during the time of the present visit.) Because it must increasingly rely upon site visits to areas where permanent personnel once resided, the need for serviceable vehicles is particularly acute. VISISA will help satisfy some of these equipment needs.

In the area of medical equipment replacement, the same general observations may be made. One interviewee expressed concern that a particular piece of equipment (centrifuges) being supplied by VISISA did not meet the specifications of the MSPAS. He stated that the equipment was dated and in several test uses did not work properly. (Specifically, he said at certain speeds one or more test centrifuges would not work.) Despite occasional criticisms such as this, there seemed to be near unanimous consent among MSPAS officials interviewed that the VISISA program was meeting a great need.

While the contention that emergency medical services constitute a priority need for El Salvador may be questioned, at this stage of its development such a critique must be tempered by the circumstances surrounding the present conflict. There are, indeed, a larger number of homicides and intentionally inflicted wounds reported in El Salvador than would be expected for a country in its stage of development. (See Section III-B-1-e.) In this kind of environment, some attention to improved emergency medical services may be appropriate.

Whether the VISISA program is well conceived or not, interviews with a number of MSPAS officials confirmed the importance of the program from their perspective. VISISA is seen as highly significant to the maintenance of a credible capability by the Ministry in its effort to provide health services for the vast majority of Salvadoran people. Field health workers repeatedly defined their primary needs in terms of the kind of relief VISISA has been designed to provide.

Accordingly, in view of the stated priorities of MSPAS officials and workers, the absence of immediately available resources by MSPAS to purchase those commodities being supplied through VISISA, the long

term need and potential of increased maintenance capacity for existing equipment, and the critical need for replacement equipment at this time completion of current VISISA program objectives is recommended.

It is important to note that this recommendation is made without any effort to evaluate the effectiveness of the VISISA program and without the benefit of other evaluations of that program. Fragmentary reports concerning the success in developing warehousing facilities in San Salvador and the establishment of a functioning cold chain throughout the country were only indirectly confirmed by the observation of commodities (e.g. x-ray film) and functioning cold storage (e.g. vaccines) in the field. Given the age of the project, questions must be raised concerning the numerous reports of continuing shortages of medicines and supplies. However, no systematic evaluation of the VISISA system and its effectiveness was requested or attempted.

B. Future Directions

The heart of the recommendations to be found in this report are included in this section. It represents the synthesis of information and experience previously referenced in relation to future AID/El Salvador health programming. The recommendations are divided into three basic sections: 1) Community Oriented Primary Health Services; 2) Integrated Rural Development and 3) Human Resources Development.

1. Community Oriented Primary Health Services

In recent years the concept of Community Oriented Primary Care (COPC) has been increasingly espoused by groups such as the Institute of Medicine, National Academy of Sciences and others. COPC grew out of early work in Israel by Dr. Sidney Kark and colleagues. The basic concept of COPC is that of primary care providers analyzing the health of the community in which they practice (not just the patients they serve), planning programs to improve the health status of the community, implementing these programs, and evaluating the results. COPC presumes the intimate involvement of the health care provider in this process, as opposed to the recruitment of specialists from other disciplines to do the job. The task is seen as one for the primary care specialist working in conjunction with relevant experts.

Community oriented primary care was first demonstrated at Kiryat Ho-Yovel, a satellite of Hadassah Hospital in Jerusalem. Here specific community surveys were undertaken among a defined population on subjects such as hypertension. Remedial programs were then put in place for the purpose of demonstrating the effect of intervention. Finally, evaluations were carried out to determine which groups, if any, were impacted by the programs. Results of this experience showed that certain illnesses can be prevented--including the more disastrous consequences of hypertension--in sufficient degree to be statistically demonstrable.

The COPC concept has been popula and brought to the United States through the work of indi uals such as Dr. Fitzhugh Mullan, former director of the National Health Service Corps and currently health director for the State of New Mexico. Several national meetings on the subject of COPC have been held and its message has been brought to countless other conferences and workshops. Increasingly, references to COPC are seen in curricula design in medical schools and elsewhere. In short, COPC is proving to be a concept which serves an organizational and educational function.

Obviously, a key component of community oriented primary care is community participation in the process. This broadens the base of participation from that of concerned providers to community residents determined to improve their health status and, if necessary, change health habits and health delivery systems in order to do so. It is this aspect of COPC which will first be stressed in these recommendations.

a. Promote Community Participation

i. Strengthen the "Patronato" System

In El Salvador many of the MSPAS Clinics, be they health centers, health units, health posts or community posts, utilize the "Patronato" system in order to raise supplemental funds at the local level. Because traditionally—and previously by law—the state was obligated to provide free health care for all who needed it, MSPAS could not charge for its clinical services. Rather, patients are offered the opportunity to "contribute" one or two colones (25¢ to 50¢) for each medical visit. Depending on the ability of the patient to pay and the administration of the unit concerned, this practice is variously honored. While no generalization will be true for all or even most MSPAS facilities, a collection rate of 50% seems to be about normal.

Once the money is collected by clinic personnel, it is recorded and forwarded to the regional MSPAS office for accounting and surveillance purposes. A local advisory board or "Patronato" is given authority—in certain size districts—to spend this money for the purposes served by the clinic. With the exception of very small items, which may be purchased out of a "petty cash" fund, all "Patronato" expenditures must be channeled through and approved by the Ministry of Health's Regional Office for that area. Money is then returned from this office to support the approved expenditure.

A number of problems have developed with reference to the "Patronato" system. One is that the "Patronato" boards are often ephemeral and may not last past the

natural t: :e of a :h facility director. The "Patronatos" also tend t: :flect the personality of the director in charge of the facility, becoming strong when encouraged to do so and atrophying—or disappearing—when not supported. Clearly, there is little self-sustaining initiative among these bodies under the present law.

"Patronatos" are governed by a federal law which provides that they shall be located in areas of a certain population size, that they shall have a certain relationship with governmental authorities, and that, in essence, they be advisors rather than decision makers.

In the United States, particularly since the 1960's, the concept of "community control" has been prevalent. Community health centers have been seen as bodies representing their communities with decision making boards elected from among the participating patient population. Support from these programs now comes from the Bureau of Health Care Delivery and Assistance located in the United States Public Health Service.

While the evolution of both community oriented primary care and community health centers must be viewed in cultural context, there may be certain lessons to be drawn which will improve the effectiveness of the "Patronato" system. If, for example, greater authority could be conferred upon local "Patronatos," either through budgetary or policy control (or both), it may prove easier both to organize and maintain functioning "Patronatos." In discussion with authorities in the Ministry of Health, assurances were given that the "Patronato" law could be changed if this were indicated. How this could be integrated with a centrally controlled health care delivery system is not clear, but is a matter that deserves further exploration.

In summary, <u>it is recommended that the "Patronato" system be strengthened by whatever means are necessary, consistent with the culture and compatible with the organization of the health care delivery system in El Salvador</u>.

ii. Improve Local Volunteer Programs

The concept of volunteerism does not appear to be well established in El Salvador, at least as it pertains to health centers, health units, health posts and community posts. Few, if any, volunteers were found on multiple unannounced site visits throughout the country. Rather, particularly in the outlying regions, overworked and harried staffs were struggling with inadequate supplies and equipment, while tr-ing to deliver adequate health

care to a large and [illegible] population. No volunteer system appears to have been established to identify, maintain and reward non-paid participants in the system.

The relative absence of volunteerism in the smaller health facilities of El Salvador may be, in part, a tribute to the global commitment made by the government to provide health care. Typically, volunteerism serves as an alternative to governmentally supported health care. It tends to flourish best in social settings where health care is seen as a privilege, rather than a right, and a sufficient percentage of the population has leisure time available to provide the needed services. In El Salvador health care is generally seen as a right provided by the government and there is a limited supply of leisure time available among the population. (See Section VII-C-1 for qualification.)

Nonetheless, a truly remarkable volunteer network has been established for some years and continues to operate successfully in El Salvador. Located in the Ministry of Health, the Malaria Control Program's "volunteer coordinators" are, as the name implies, "volunteers." These individuals function, as noted in Section III-B-2-d and V-A-5, without remuneration. The success of this program may be due to the autonomy which it enjoys within the Ministry and the high visibility of the disease with which it is concerned.

Other examples of effective volunteerism in the field may be found in El Salvador. These include the Salvadoran Red Cross, as well as a host of private voluntary organizations (PVOs) working in the country. Many of these enjoy Salvadoran participation in their work.

It is suggested that, drawing upon what volunteer tradition already exists in El Salvador and the need for additional personnel in MSPAS health care facilities, a regionally coordinated MSPAS volunteer program be initiated as soon as possible. This could parallel the recently established program in Mexico City, developed by Dr. Jose Laguna, which already involves over 50,000 participating women. Such a program could have a tremendous impact on the outreach potential of MSPAS facilities, as well as provide a sense of "ownership" to all those who participate.

A final advantage is that, given the scarce resources available to the Ministry of Health, a volunteer program would expand the personnel base with minimal cost to the Ministry.

In summary, it is recommended that a substantial effort be made to identify, train and support volunteers to work in MSPAS health care facilities and as outreach workers.

iii. Investigate Minimum Charges for Medications

As previously noted, health care delivery in El Salvador is free for those who need it. Despite a small "contribution," theoretically all citizens of El Salvador are eligible for government provided health care delivery if they are not part of some other delivery system (e.g. Social Security, ANTEL, etc.).

A little known fact is that although under the previous constitution it was unconstitutional to charge for such services, this provision is not part of the current constitution. (The current constititution is the one which made possible the recent election of Napoleon Duarte as President.) This opens the possibility of experimentation in the area of charging for health services, which could help ameliorate the resource crisis currently affecting MSPAS.

Previous experience in this regard is not encouraging. In at least one situation an MSPAS facility attempted to levy some form of "charge" on its clients and was heartily rebuked by the press and others. The effort was suspended. Recent articles in the press demonstrate concern over the cost of medications. (30) Obviously, political implications need to be considered when making any such move.

If some form of charge were to be assessed for health services at this point, the question is where would the charge be most effective and acceptable? The probable answer to that question lies in the area of medications. One MSPAS facility visited reported that their patient population began to decline in direct proportion to the shortage of drugs which they had to administer. These patients were reported to have gone to a nearby private facility which had a better source of supply. Further, it is customary in El Salvador to prescribe on the average of three or more drugs in conjunction with each visit. This also proves costly to the system and contributes to the shortages of drugs in government operated facilities.

An obvious conclusion, therefore, is to explore the imposition of a small charge on drugs. This would have the potential advantages of: 1) raising revenue for MSPAS facilities; 2) discouraging the indiscriminate use of medications by patients; and 3) leading practitioners to follow more cost effective and medically indicated

prescribing patterns. Clearly, the matter would have to pass the political "litmus test" before it could be implemented.

AID/El Salvador currently intends to carry out a study of charging for health services by MSPAS. This study could and probably will look at the concept of selectively charging for medications as well as all health services. This study, when completed, should provide additional useful information on the matter being discussed.

In summary, <u>it is recommended that consideration be given to the possibility of instituting minimal charges for medications prescribed and dispensed by MSPAS facilities</u>.

b. Conduct Community Needs Assessment with Professional Participation

As noted in the discussion of Community Oriented Primary Care, the first step in a COPC program is the design and administration of a community health needs assessment by local health care providers operating in conjunction with professionals in survey methodology. This has the advantage of increasing the awareness of the providers to the problems faced by their community of potential patients and to help them begin to think creatively about possible solutions to these problems. Cooperating with competent social scientists in this effort further enhances the capacity of the provider to understand and intervene in the identified problem areas.

El Salvador has a strong tradition of participation by environmental sanitarians in all levels of health care delivery. The task of these individuals is, in part, to conduct community surveys and to identify problem areas requiring intervention. Circular diagrams of each house under surveillance are posted on the sanitarian's wall in the clinic being served with appropriate quadrants marked to represent real or perceived deficiencies. As interventions are made, the quadrants are colored to reflect improved (or deteriorated) conditions.

The concept of more broadly based community assessments, to include analysis of provider patient interaction, major health care concerns of the population, etc. is not firmly rooted. If the transition to Community Oriented Primary Care is to take place, this must be changed.

The groundwork for such an innovation is already present in El Salvador. This comes from the previously described statistical conditioning which leads health care providers to record in scrupulous detail each of their many activities. To extend this concern to community-wide assessments,

cording these data as the collected would likely not be too different from what iders are now doing with medical data.

A possible way of getting this activity underway is to make clear the interest of MSPAS in having it take place, suggesting one or more formats by which it may occur (hopefully, not an exclusive required format), and making available social scientists who will come into the area and work with the providers as they initiate their survey methodology. Such a system, if instituted, should tie closely into the efforts to strengthen and encourage the "Patronato" and volunteer systems. These two objectives could, and probably should, be included in any plans for a community assessment. Such a community assessment could also measure the willingness and acceptance of a population to changes in the health care delivery system--for example, institution of a minimal charge for medications.

In summary, <u>it is recommended that a community needs assessment process be instituted at the local level by health care providers under the direction and leadership of MSPAS in coordination with designated social scientists</u>.

c. Implement Program Evaluation at the Local Level

Program evaluation at the local level is a natural extension of community needs assessment. As indicated under the discussion of COPC above, community needs assessment, program development and program implementation all lead up to one necessary follow-up activity--program evaluation. Without this, health care providers, the government and outside funding sources are not sure of the impact of their interventions.

Evaluation methodology can be quite esoteric and, as such, inappropriate to a setting such as El Salvador. Evaluation methodology typically focuses on either "process" or "outcome". Process measurements tend to be much easier, because they measure activities carried out by the health care delivery system. Outcome measures are much more difficult to assess, since they require evaluation of ability to function, overall well being, and other obscure issues sometimes associated with quality of life.

Clearly, in the context of El Salvador, evaluation needs to focus on process primarily and outcome only in the most ultimate and global sense. The kind of outcome measurements appropriate to this setting are the well known health care indices of morbidity and mortality, such as infant mortality rate. These are internationally accepted, are already recorded in El Salvador, and provide an ultimate measure of the health care delivery system coupled with the impact of environment on the health of a given population.

Crude process measurements appropriate to a setting such as El Salvador include patient contacts with the physician (see discussion under IV-B), the acquaintance of the provider with current medical literature (easily measured by standard testing), and involvement of both the patient and provider in selected preventive health activities.

With reference to specific program evaluation, this needs to be designed individually in relation to the program in question. A program designed to control parasitosis, for example, could be measured on a process scale by the number of patients in the community taking Mebendazole prophylactically or on an outcome scale by the number of residents displaying parasite eggs in their stools on a random survey. Once again, it is not suggested that such evaluations be elaborate or beyond the fiscal or personnel resources of El Salvador. Rather, it is suggested that they be carried out in a limited and targeted way consistent with the available resources and the objectives of the programs undertaken.

In summary, <u>it is recommended that limited and appropriate program evaluations be undertaken at the local level with the guidance of the Ministry of Health, participation by local providers, and with the assistance of relevant social scientists</u>.

2. Integrated Rural Development

The concept of integrated rural development is not new. In overall development theory, it is consistent with the perspective that various forms of development proceed along simultaneous parallel paths rather than sequentially. This is particularly relevant with respect to health, where some have held that economic development should precede development in the social services arena. Integrated rural development is consistent with the philosophy that development in all basic sectors should proceed in tandem.

The issue is particularly relevant in rural areas, where the agricultural, nutritional and health sectors are so closely interrelated. A common problem associated with agricultural production in developing economies is that food crops are often displaced by cash crops to the detriment of local nutrition. Similarly, food crops may be produced, but sold for profit, leaving little behind for local consumption. Linkages between the productive sector and the health sector become immediate and direct in such a setting.

The following recommendations presume importance of programs other than direct health services delivery in improving overall health status. Just as integrated rural development visualizes the concurrent development of an infrastructure in health along with an economic infrastructure, this discussion assumes

concurrent development of various health related activities, such as health education, nutritional awareness and environmental sanitation programs—along with primary care delivery. Only then will there be an integrated health care delivery system to take its place as part of an integrated rural development network.

a. Expand Health Education Programs

Health education is already an important part of health care delivery at the local level in El Salvador. No MSPAS facility was visited that did not have an abundance of health education posters exhorting mothers to breast feed their babies, giving tips on family planning and warning of the dangers of diarrheal disease. Cooking demonstration equipment is available in many clinics and was in use in one or two during unannounced site visits. Nurse auxiliaries and others give lectures to waiting patients, taking advantage of congested waiting rooms and captive audiences. Several such lectures were witnessed on site visits to facilities ranging in size from community health posts to regional hospitals.

When asked what programs are needed to improve the health status of Salvadoran people, health professionals not infrequently responded with "better programs of health education." There seems to be some consensus among health providers in El Salvador that no matter how adequate the health delivery system, it will prove deficient it it fails to deliver meaningful health education. This is for the obvious reasons that problems merely recur, once treated, if not prevented through programs of consumer awareness.

Since health education is primarily the responsibility of nurses and nurse auxiliaries in the clinic settings, it is suggested that this be continued and reinforced. Similarly, the health education division of the Normative Technical Services Division of the Ministry of Health should receive adequate resources to make this possible.

One potential resource which should be explored as a low cost method to expand health education efforts is that of using volunteer workers for this purpose. (See Section VIII-B-1-a-ii above.) The previously referenced program underway in Mexico City should be studied as a model for expanded health education activities in El Salvador.

In summary, <u>it is recommended that there be a continuing expansion of health education activities as an integral part of MSPAS activities in El Salvador, that this include increased training programs for nurses and nurse auxiliaries, and that the potential involvement of volunteer workers in the effort be explored</u>.

b. Strengthen Current Nutrition Programs

While data indicate there is still a problem of malnutrition in El Salvador, gross malnutrition is not evident among the population in the areas visited. This is confirmed in the limited available literature. (31) Kwashiorkor may be found, although rarely. More common are the less obvious forms of protein/calorie malnutrition seen in much of the developing world. Combined wasting and stunting may be found--often in association with diarrhea. (32)

As is usually the case, malnutrition seems most prevalent in rural areas. This is for the reason stated previously under the general discussion of integrated rural development and because of the higher levels of poverty and lack of awareness concerning proper nutritional requirements in these areas. It is for this reason that AID/El Salvador has been working with the Government of El Salvador to promote the development of Rural Nutrition Centers.

Rural Nutrition Centers are typically located in small rural communities or on cooperative farms resulting from the agrarian reform effort. These centers are provided by the government with five basic commodities (beans, rice, powdered milk, corn meal and cooking oil) and are encouraged to obtain fresh vegetables and other local products to supplement meals prepared for preschool children. The children are brought to the centers by their mothers, who may work in the fields or have responsibility for care of additional children in the homes. The children are at the centers from early morning until mid-afternoon and are provided with a hot lunch while there.

Rural Nutrition Centers typically serve 30 to 50 pre-school children and are staffed by a director and two assistants plus a volunteer mother. The director makes 100 colones ($25) per month and the assistants 75 colones ($19) per month. Mothers of the children are expected to rotate coverage so that at least one is present at the center every day. (Part of the concept is to train the mother who comes to the center as well as obtain her assistance in managing the children.)

Rural Nutrition Centers have as one of their objects stimulating the children, as well as simply providing them with improved nutrition. Accordingly, staff are encouraged to engage children in games and creative play during the day, inculcate improved sanitary habits (e.g. washing hands before eating), and provide such supplementary education as they are able to offer. Unannounced visits to two of these centers demonstrated them to be functioning as projected and showed groups of apparently well nourished children. (Because stays at the center were short, it was impossible to evaluate the non-nutritional component of the centers.)

When questioned about the impact of such centers on the overall health of rural El Salvador, MSPAS officials gave similar replies. The center program is good and deserves to be continued. Generally speaking, it has worked better in communities selected by MSPAS for their need and previous history of cooperation than it has in rural cooperatives. (Several of the centers have failed in these latter settings.) Only 30 centers now exist.

Because of the very large number of children in El Salvador, given the extremely high birth rate and the relatively small number of children covered by the existing rural nutrition center program at present, several officials expressed doubt concerning the program's overall impact. One indirect criticism from a private voluntary organization representative contacted was that the program relies too heavily on imported commodities and not enough on locally produced foods. Prospects for continuity beyond the period of government sponsorship were therefore questioned.

Given the foregoing, it is suggested that the Rural Nutrition Center program be expanded and operated in close conjunction with the Ministry of Health. It is further suggested that ways be found to coordinate this effort with the Ministry of Education and supplemental feeding programs in the schools. Wherever it is based, the full participation of recipients' parents as volunteers in the program should be encouraged.

In summary, it is recommended that the Rural Nutrition Center program be expanded in scope, including an emphasis on greater coordination with Salvadoran agencies and more self-sufficiency in food production, and that its target population of children and their parents be broadened. Finally, wherever possible, use of locally produced foods is encouraged.

c. Continue with Current Sanitation Programs and Develop New Programs

One of the major factors--if not the major factor--in an integrated rural development program from the health perspective is environmental sanitation. Where environmental sanitation is poor, it is difficult to obtain satisfactory health indices. Without potable water and protection from fecal contamination, the health of a population will remain in jeopardy. Historically, improved environmental sanitation has been a major factor in improving the health status of a population.

As suggested, the common denominator of environmental sanitation is a clean environment. In developing countries, this typically means clean water and adequate latrines for waste disposal. In more developed countries, concern then shifts to chemical contamination of bacteriologically pure

water and contamination of the atmosphere. In a country such as El Salvador, primary attention still needs to be focused on the development of potable water systems and a more adequate network of latrines.

Because of its geographic location, there is another important environmental need in El Salvador. The malaria problem in the country has previously been mentioned. (See Sections III-B-2-d and V-A-5). This problem continues to be serious. Any meaningful environmental health program must address the spread of malaria and work for its control.

i. Install Additional Potable Water Systems

As noted under V-A-3 above, PLANSABAR plays a crucial role in developing potable water systems for El Salvador. Equally crucial is the Interamerican Development Bank, which provides the funding for much of this development. Working in coordination with PLANSABAR, AID has played an important role in the process.

As has been indicated, the design and construction of potable water systems in El Salvador is somewhat more sophisticated than in many parts of the developing world. By utilizing a network distribution system, as opposed to a central community source, the systems installed are more expensive and more complicated to maintain. As a result, large sums of money are needed for the continued development and maintenance of potable water systems in the country.

As has been stated, there is no more important ingredient to the health of a population than adequate supplies of potable water. By investing at this time in a quality system, El Salvador is assuring itself of a more healthful future. Currently projected projects by BID and PLANSABAR will serve between 350,000 and 500,000 additional people. These projects need to continue and they need to be taken into the zones of conflict. to the degree that AID can be a participant in this process, it should do so.

In summary, <u>it is recommended that the active development of potable water supplies continue at the projected rate, including installation in the zones of conflict, and that AID be a participant in this process</u>.

ii. Construct Additional Latrines

As has been noted, in addition to potable water the next most important factor in assuring sound public health is a satisfactory means of waste disposal. Since modern sewage treatment systems are, for the most part,

irrelevant to the economic situation of rural El Salvador, an adequate program of latrine construction is necessary. Given the extraordinarily high incidence of parasitic disease in the country, this assumes even greater importance.

As has been noted, only a small proportion of BID financing currently goes into the construction of latrines. MSPAS officials have explained that this is due, in part, to the fact that potable water projects have more impact on the population being served. The result is that relatively few latrines are being built, even though their individual construction cost is quite small.

Given that the construction level of potable water systems, with BID, AID and other assistance, is progressing at a satisfactory rate, it is possible that a greater emphasis on latrine construction should be given by both MSPAS and AID/El Salvador. This should be undertaken using some of the new latrine designs (e.g. Blair pit latrine) being tested by Save the Children and others around the world. Indeed, such efforts might best be carried out in collaboration with PVOs interested in and experienced with latrine construction programs.

In summary, <u>it is recommended that an expanded latrine construction program be undertaken, with assistance from AID and in conjuction with private voluntary organizations working in El Salvador, utilizing new and innovative designs</u>.

iii. Eliminate Mosquito Breeding Areas

As already noted, malaria remains a major health problem in El Salvador. Not only is it a source of mortality, but it results in morbidity and debilitation. This has negative implications for the work potential of the population and consequently negatively impacts the economy.

Also, as previously noted, the malaria control program in El Salvador is quite sophisticated. Using an army of volunteers and the latest in malaria control technology, the program has identified those control measures which work and those which do not. This experience is authenticated by both MSPAS and Pan American Health Organization officials who collaborate in the control program effort.

The consensus of those working in malaria control is that the most effective single measure for controlling the spread of the disease is the elimination of mosquito

breeding areas. This means the active involvement of the total population in controlling breeding sites, with leadership and direction from a cadre of trained malaria control workers. Only when this is done is there a reasonable prospect for controlling, if not eliminating, the disease in El Salvador.

Accordingly, while many environmental health issues could be singled out for attention, control of mosquito breeding is the third and final one which will be recommended in this report. Every effort must be made to assure that complacency does not result from limited temporary successes in malaria control. Rather, the effort must be ongoing and continuous if the program is to succeed.

In summary, it is recommended that an aggressive program of eliminating mosquito breeding areas be continued and enlarged in an expanded effort to reduce the incidence of malaria in El Salvador.

3. Human Resources Development

Perhaps the most important part of any development program is that associated with human resources. It is sometimes easier to enter into large construction projects or undertake programs that are less "people dependent." However, it is with the change in people that development truly occurs and human resource investment is directed at achieving that change.

Human resources typically include health, education and a variety of social services. It is essential that the primacy and interrelatedness of the educational effort not be forgotten as other forms of resource development are undertaken. Indeed, the potential for collaboration between the health and education sectors is enormous. Education may be brought into the clinic and health into the schools. The growth of this symbiotic relationship should be encouraged wherever possible.

This section will deal exclusively with human resources development in the field of health and there treat only three limited areas. Each recommendation is distinctive in its approach and not directly related to the others. The first deals with physicians and their need for a more broadly based education. The second concerns the general need for continuing education by all health providers and the third is directed to a specific newly emerging class of providers--the Rural Health Aide.

a. Increase Training Capacity for Physicians in Primary Health Care, Nutrition and Disease Prevention

Historically, training for physicians in El Salvador had been traditional and hospital directed. Primary care has not been stressed as an acceptable career alternative and the areas of

nutrition and disease prevention have appeared sporadically in the curriculum. As such, the situation is not unlike that of most medical schools in the United States and much of the developed world.

Since the invasion of the University of El Salvador Medical School campus in June of 1980, however, there have been substantial changes. Primary among these is the evolution of four additional medical schools, each one of which teaches the disciplines of primary care, nutrition and disease prevention to greater or lesser degree, but with increased emphasis over past practices. Likewise, the University of El Salvador Medical School has revised its curriculum to feature some of these components. The result is that medical education in El Salvador is moving more toward an holistic approach to health care than was true in the past. (See Appendix VII.)

This needs to be encouraged and, if possible, supported with outside assistance. One approach is in the classroom curriculum, where at least one medical school (Evangelical University) now claims eight continuous semesters of instruction in community health care.

To the degree that AID becomes involved in assisting medical school development, it may wish to consider involvement in these specific programs and one or more medical schools in El Salvador. The symbolism of rebuilding the preventive medicine and technical training capacity of the National University Medical School would be substantial, given the extraordinary destruction of that portion of the campus. (See Section VIII-C.) Likewise, steps could be taken to finance programs already approved by the medical school and MSPAS, but not implemented for lack of funding. An example is medical school supervision of physicians-in-training during their social service year. This would be an excellent way in which to teach primary care in the context of actual health care delivery.

In summary, <u>it is recommended that training in primary care, nutrition and disease prevention for physicians be markedly increased, possibly with U.S. AID assistance, and that the preventive medicine and training capacity of the National University Medical School be restored</u>.

b. Expand Continuing Education for all Health Professionals

Just as equipment maintenance is a major problem in El Salvador and all developing countries, so is maintaining an adequate quality of care for those who are already engaged in practice. The tendency is to graduate from a training program, receive one's certificate and enter into practice without an assured mechanism for continuing education in that individual's field of choice.

Continuing education should be seen not only as a necessity for physicians, but for all health professionals. This could be achieved within the present MSPAS structure by strengthening and expanding the human resources division of the Ministry. Such an expanded program should assure contact with as many health professionals in the country as possible, especially those located in remote rural areas. It should "take the program to the people," instead of expecting people to come to the program. A possible mechanism to assure attendance is to invoke some continuing education requirement not unlike those established in recent years by various professional groups in the United States and elsewhere.

In summary, it is recommeded that continuing education be made avaiable to all health professionals in El Salvador in whatever manner is most productive. This should be accomplished by taking the programs to the people and reinforcing the structure already available in the Ministry to achieve this purpose.

c. Review and Strengthen the Rural Health Aide Program

As noted under Section IV-C-2-c, the Rural Health Aide (ARS) is a relatively new member of the Salvadoran health care team. While some 400 have been trained in four centers around the country, no training is now underway and only two of the former training centers are potentially usable for this purpose. The last group of 80 trainees are still being paid with AID funds. In spite of almost universal praise from health providers throughout the country for the program, there is little evidence of plans to train additional Rural Health Aides at present. This is despite a goal of placing one ARS in each of the 2,071 villages in El Salvador. Clearly, if this goal—as articulated by the program's director—is to be met, a new start in ARS training and support must be made.

Rural Health Aides have demonstrated their capacity to deliver health services. These new health professionals were responsible for 113,018 preventive health contacts and 134,335 consultations for sick patients in 1982. In addition, Rural Health Aides reported reaching out to over a quarter million Salvadorans through some form of educational activity. (11)

In a country and Ministry already short of provider-patient contacts, it would be unwise to minimize as cost effective a program as the Rural Health Aides. Moreover, if a community oriented primary care approach is to be followed, community-selected ARS trainees should be best able to bring the message of good health back into their own communities.

In summary, it is recommended that the Rural Health Aide training program be reinstituted and that a large scale effort be undertaken to identify and support acceptable candidates for the program.

C. Role of Medical Education/University of El Salvador

While there are many difficulties and shortcomings with the health situation in El Salvador, none compares in gravity to the closure of the medical school at the University of El Salvador on June 26, 1980. The invasion of military forces at that time completely disrupted the entire university and destroyed a large portion of the medical school. The old medical school building stands as a reminder of what happened. Its dome sits empty, punctuated by an opening in the ceiling and rubble on the floor. Much of the building's second story rests in ruins on the ground of the first story. Giant slabs of concrete hang from partially destroyed walls and ceilings by threads of surviving rebar. (This matter is addressed in Section VIII-B-3-a.)

Yet medical education in the country goes on. The National Medical School at the University of El Salvador, which was unable to accept new students during the period 1980 to 1983, has continued to operate for those students already enrolled and is projecting a class of nearly 1,000 entering students in 1984. Deprived of its physical plant, the medical school meets in a rented garage, with the students sharing a portion of the rental payments. A modest tuition (10 colones per month) replaces what had previously been free medical education and covers other expenses incurred by the medical school in addition to their facility rental.

The curriculum of the National Medical School takes into account updated priorities for medical education, including the need for primary care and preventive health services. As noted previously, the curriculum design even provides supervision of physicians in their year of social service. Unfortunately, the scarcity of resources makes this impossible at the present time and suggests a possible project where AID/El Salvador might become involved. (The Dean of the National Medical School, Dr. Jose Marinero Caceres, specifically expressed a need for current periodicals and indicated a willingness to accept them from AID or some source identified by AID, should this be considered a program priority for the mission.)

Four of the country's medical schools began following the invasion of the University and the consequent inability of the University of El Salvador to accept new students for the past two years. The two largest of these, the Evangelico University and the Masferrera University Medical Schools, will graduate their first classes in 1986. Because the University of El Salvador did not accept new students during the period when these new university medical schools were getting underway, there will be a time "window" within which the new schools will be producing the only new medical graduates. At the end of that time--presumably in 1989--there should be an over-supply of physicians graduating from the now numerous medical schools in El Salvador. (33)

It is possible that all medical schools currently in existence will not survive. The smallest of these, in Santa Ana, may find it difficult to compete with those in the capital, particularly with the University of El Salvador now accepting so many new students. Further, as the University in El Salvador returns to the main university campus (not the School of Public Health, which is beyond repair), there may be a further pull away from the private schools toward the traditional and esteemed national medical education.

Whatever their desirability, the fact remains that El Salvador now has multiple medical schools. Until the situation changes, it must be dealt with as a reality and efforts made to rationalize the health manpower production schedule in keeping with the country's needs. Further, every effort must be made to promote and encourage the education of physicians so as to advance the goals articulated in the "Health for All by the Year 2000" theme and to implement the recommendations contained in the five year plan of the Ministry of Health. (34)

In summary, it is recommended that medical education in El Salvador be both supported and constrained so that quality schools may survive, but that this be accomplished in such a way that it does not result in a serious oversupply of physician manpower.

D. Loans vs. Grants

While it was not a suggested topic for the current study, a particular concern arose in looking at the proportion of loan and grant money in the VISISA project. A project largely concerned with commodity importation and distribution, as well as the other activities already described, VISISA was conceived to strengthen the capacity of the health care system to respond to an immediate basis. With some exceptions, it is not visualized as building the kind of infrastructure which will be finanicially productive to the country of El Salvador. While the financial productivity of health facilities may be debated, they at least generate revenue for the system. Most of the activities supported by VISISA do not.

It was therefore somewhat surprising to learn that nearly 95% of the VISISA budget is in the form of a loan to the government of El Salvador rather than a grant. While the payment terms are quite liberal, the fact remains that the government of El Salvador is indebting itself for up to forty years in turn for receipt of this emergency assistance. Coupled with other loans which it receives for military assistance, etc, it is entirely conceivable that the government of El Salvador will not be able to pay these debts and will thereby contribute to the debt crisis which has generated so much worldwide concern.

Previously, AID was more apt to respond to needs such as those represented by VISISA through a grant program. Now awards are being made largely as loans. This is an unfortunate tendency and has potentially very negative consequences for future relationships between the government of El Salvador and that of the United States. The policy should be reversed.

In summary, it is recommended that all future AID awards to El Salvador be made as grants rather than loans for any health related project other than those directly contributing to the productivity of the Salvadoran economy.

E. Schedule of Follow-up Visits--Mid-term and Final Evaluations

AID/El Salvador plans to have carried out a follow-up study similar to the project nine to ten months after the first, and a third eleven to twelve months after that. The purpose will be to see what response, if any, there has been to the recommendations in this report and to measure their concurrence with the Ministry's proposed five year plan. (See Section VII-C above.) A second study could be used to "fine tune" the recommendations and the third study to evaluate overall progress.

These studies would provide some independent analysis of progress coupled with an external review of what changes need to be made either in the program then underway or the recommendations made for it. A particularly useful outcome will be the final evaluation report on the impact of AID/El Salvador assistance over a period of approximately twenty months.

Therefore, it is recommended that the two proposed follow-up studies be performed as scheduled and that they be used to assess program progress, make recommendations for changes in program direction and prepare an independent evaluation of program success.

IX. SUMMARY AND CONCLUSIONS

This report provides a health sector policy and program review for El Salvador. It was conceived as an independent analysis of the health situation in El Salvador and the response of AID/El Salvador to that situation. The purpose of the review was to suggest new directions for AID/El Salvador, not to critique current or past performance.

A key element in the report is a collection of health data pertinent to policy and program, together with an analysis over time of such data and their significance. Of particular importance to this analysis is an understanding of the statistical methodology and commitment displayed by the Ministry of Health. (35) Additional data sources and comparisons are used, where available and relevant.

Another major focus of the report is a presentation of the organization and structure of health seminar in El Salvador, with an emphasis on those services provided by the Ministry of Health. (36) Program and activities of the Ministry are presented in some detail, particularly those relating to primary care. Ministrial priorities and plan for the future are reviewed.

Central to the authenticity of the report are the results to unannounced visits to health facilities in all of five health service region defined by the Ministry of Health. The methodology--as well as the outcome--of these visits is presented. Where possible, information obtained from data analysis and program review is correlated and compared to findings of the site visits.

Based on the foregoing, a series of specific recommendations is presented for consideration by AID/El Salvador. In summary, it is recommended that:

1.) the "Patronato" system be strengthened by whatever means are necessary, consistent with the culture and compatible with the organization of the health care delivery system in El Salvador;
2.) a substantial effort be made to identify, train and support volunteers to work in MSPAS health care facilities and as outreach workers;
3.) consideration be given to the possibility of instituting minimal charges for medications prescribed and dispensed by MSPAS facilities;
4.) a community needs assessment process be instituted at the local level by health care providers under the direction and leadership of MSPAS in coordination with designated social scientists;
5.) limited and appropriate program evaluations be undertaken at the local level with the guidance of the Ministry of Health, participation by local providers, and with the assistance of relevant social scientists;
6.) there be a continuing expansion of health education activities as an integral part of MSPAS activities in El Salvador, that this include increased training programs for nurses and nurse auxiliaries, and that the potential involvement of volunteer workers in the effort be explored;

7.) the Rural Nutrition Center program be expanded in scope, including an emphasis on greater coordination with Salvadoran agencies and more self-sufficiency in food production, and that its target population of children and their parents be broadened;
8.) the active development of potable water supplies continue at the projected rate, including installation in the zones of conflict, and that AID be a participant in this process;
9.) an expanded latrine construction program be undertaken, with assistance from AID and in conjunction with private voluntary organizations working in El Salvador, utilizing new and innovative designs;
10.) an aggressive program of eliminating mosquito breeding areas be continued and enlarged in an expanded effort to reduce the incidence of malaria in El Salvador;
11.) training in primary care, nutrition and disease prevention for physicians be markedly increased, possibly with U.S. AID assistance, and that the preventive medicine and training capacity of the National University Medical School be restored;
12.) continuing education be made available to all health professionals in El Salvador in whatever manner is most productive. This should be accomplished by taking the programs to the people and reinforcing the structure already available in the Ministry to achieve this purpose;
13.) the Rural Health Aide training program be reinstituted and that a large scale effort be undertaken to identify and support acceptable candidates for the program;
14.) medical education in El Salvador be both supported and constrained so that quality schools may survive, but that this be accomplished in such a way that it does not result in a serious oversupply of physician manpower;
15.) all future AID awards to El Salvador be made as grants rather than loans for any health related project other than those directly contributing to the productivity of the Salvadoran economy, and
16.) the two proposed follow-up studies be performed as scheduled and that they be used to assess program progress, make recommendations for changes in program direction and prepare an independent evaluation of program success.

Beyond these specific recommendations, a general set of observations is offered regarding the direction of current and future AID policy and programs in El Salvador. (A more global set of suggestions, not necessarily limited to El Salvador, is included as Appendix VIII.) Particular focus is placed on the draft Five Year Plan under consideration by the Ministry of Health. Whether adopted or not, introductory sections of the plan constitute "must reading" for anyone truly concerned about policy and programs in El Salvador.

Underlying everything that follows in the plan is a critical analysis of the social inequities in El Salvador and the previous inadequate response to those inequities. Given the current conflict and its devastating impact on the health of the population, the health sector has a critical role to play--both preventive and curative--in redressing these inequities. Emphatic consideration must be given to human rights

violations, particularly as they relate to the health sector, as a precondition to dealing with all other social injustices. (See Appendix IX.) The central recommendation of any health policy and program review for El Salvador today must be to assist the Ministry of Health in every way possible to fulfill its self-defined responsibilities in this area.

The major conclusion from this review is that El Salvador is not without hope in its effort to establish a more just society in which the right to health care is made real. In order for this to happen, the Ministry of Health must involve all Salvadorans in the struggle against the causes of ill health. AID/El Salvador has an important and potentially pivotal role in this important undertaking.

X. FOOTNOTES/BIBLIOGRAPHY

1. Handbook of Resolutions and Decisions of the World Health Assembly and the Executive Board, Volume II, Fifth Ed. (1973-1982), World Health Organization, Geneva, 1983.

2. Priority Health Needs in Central America and Panama, Executive Summary, Pan American Health Organization, Washington, D.C., June, 1984, 11 pp.

3. El Salvador Health Systems Vitalization Project Paper AID/LAC/P-160, Proj. No. 519-0291, USAID, Washington, D.C.

4. "Advice of Program Change," Health Systems Vitalization, El Salvador, AID, Project No. 519-0291, July 11, 1983.

5. Letter by Rep. Clarence Long to Hon. George P. Schultz, August 5, 1983.

6. Letter by Mr. M. Peter McPherson to Rep. Clarence Long, October 20, 1983.

7. Goldstein, Richard, Gellhorn, Alfred and Lawrence, Robert. Humanitarian Assistance to El Salvador--Health Related Issues. Memorandum Prepared for Aesculpapius International Medicine and the International League for Human Rights, Jaunary 20, 1984, 11 pp.

8. AID Personnel Procurement Notice for Public Health Epidemiologist, USAID, Washington, D.C., July, 1984.

9. 1983 World Population Data Sheet, Population Reference Bureau, Inc., Washington, D.C., April, 1983.

10. "Basic Indicators," World Development Report, The World Bank, 1983.

11. Memoria 1983-84, MSPAS, El Salvador, 1984, 162 pp.

12. Memoria 1982-83, MSPAS, El Salvador, 1983, 142 pp.

13. Salud Publica en Cifras, Anuario No. 15, 1982, MSPAS, El Salvador, 1984, 112 pp.

14. Salud Publica en Cifras, Anuario No. 14, 1981, MSPAS, El Salvador, 1983, 79 pp.

15. Salud Publica en Cifras, Anuario No. 13, 1983, MSPAS, El Salvador, 1982, 74 pp.

16. "Informe de Actividad--1982; El Salvador" and "Actividades de Cruz Roja Salvadorena y el Comite International Durante 1983," ICRC, San Salvador, 1984.

17. Informe Anual 1983, Banco Interamericano de Desarrollo, Washington, D.C., 1984, 168 pp.

18. Progreso Economico y Social en America Latina--Recursos Naturales, Informe 1983, Banco Interamericano de Desarrollo, Washington, D.C. 1984, 415 pp.

19. Correa, Hector, Report of Work Performed Under Contract with International Programs in El Salvador, July 30 to August 18, 1984, USAID, San Salvador, 1984, 28 pp.

20. Rubin, G. el at: "Trabajodores de Atencion Primaria. El Programa de Auxiliares Rurales de Salud en El Salvador," Bol. Of. Sanit. Panam., Vol. 94 (6), June, 1983, pp. 560-569.

21. Health Sector Assessment--El Salvador, USAID, San Salvador, May, 1978, 225 pp.

22. Ley de Presupuesto General y de Presupuestos Especiales de Instituciones Oficiales Autonomas, Ministerio de Hacienda, El Salvador, 1984, 268 pp..

23. Ley de Salarios con Cargo al Fondo General y Fondos Especiales de Instituciones Oficiales Autonomas, Ministerio de Hacienda, El Salvador, 1984, 268 pp.

24. Metas Factibles en el Saneamiento Basico Rural--1984-1989, PLANSBAR, San Salvador, 1984.

25. Aspectos Tecnicos del Plan Nacional de Saneamiento Basico Rural, PLANSABAR, San Salvador, 1984.

26. Analisis del Avance del Decenio del Agua y el Saneamiento 1983--Sector Rural, PLANSABAR, San Salvador, 1984

27. Goldstein, Richard: "Problems in Providing Humanitarian Assistance to Displaced Persons in El Salvador," October, 1984.

28. Clements, Charles, M.D. Witness to War--An American Doctor in El Salvador, Bantam Books, N.Y., 1984, 268 pp.

29. Quijada, H.M.: Direccion de Planificacion de los Servicios de Salud, MSPAS, San Salvador, August, 1984.

30. Candray, Orrego: "Ese Precio de la Medicinas," Editorial, La Prensa Grafica, Jueves, 16 Agosto, 1984, p. 17.

31. Stetler, Harrison, C., M.D. Introduction of Height Measurement to the El Salvadorean Nutrition Status Surveillance System and Evaluation of Weight-for-Height and Height-for-Age Indicators, Central America Research Station, July 1979, 10 pp.

32. Stetle, H.C.: "Anthropometric Nutrition Status and Diarrhea Prevention in Children in El Salvador," Am. J. of Trop. Med. Hyg., Vol. 304 (4). 1981, pp. 888-893.

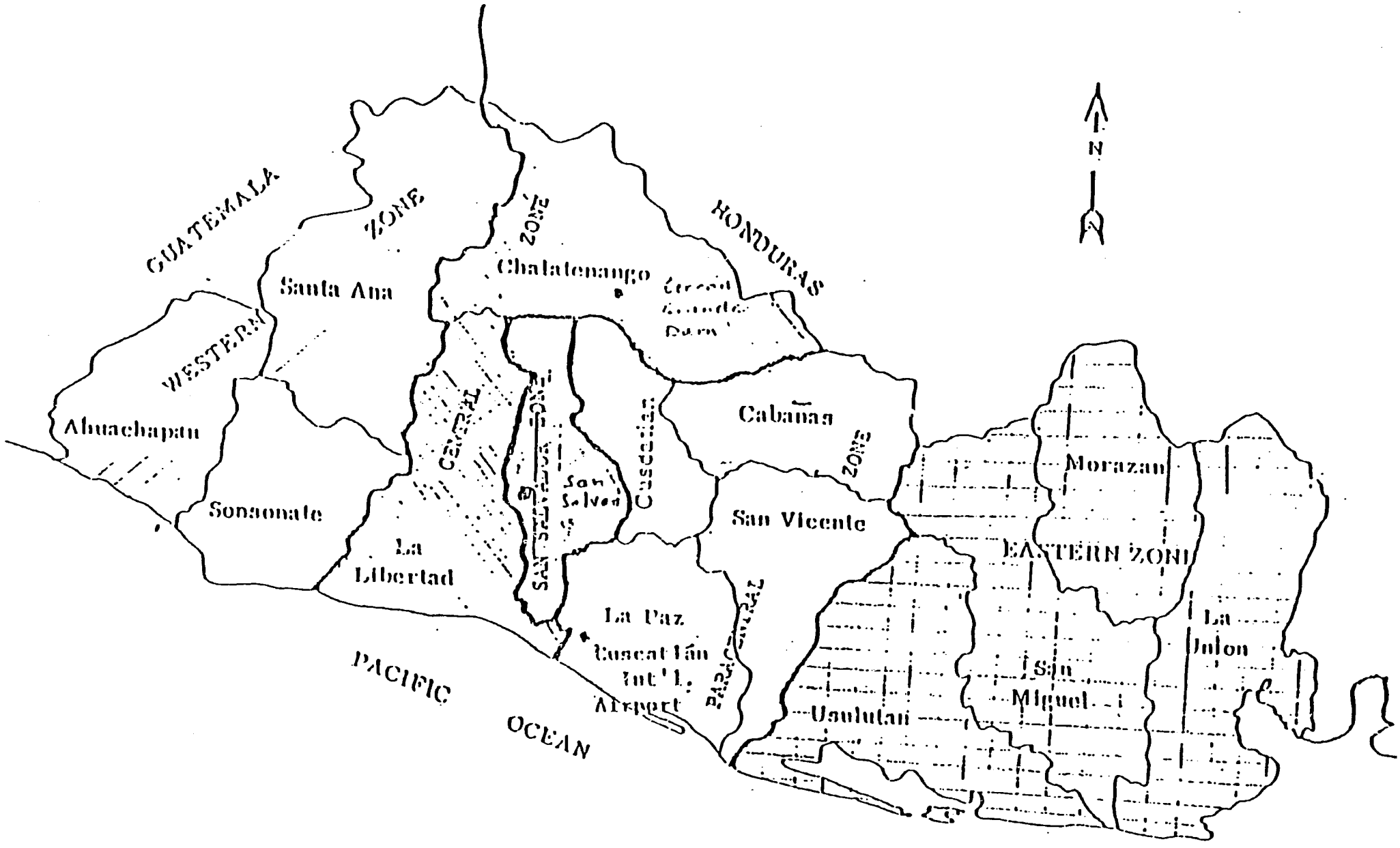
33. Schuftan, Claudio, M.D. Preliminary Report on Health Manpower in El Salvador, USAID, San Salvador, 1984, 23 pp.

34. Bryant, J.H.: "Health Services, Health Manpower, and Universities in Relation to Health for All: An Historical and Future Perspective," Am. J. of Public Health, Vol. 74, No. 7, July, 1984, pp. 714-719.

35. Sistema de Estadisticas de Salud--Organizacion y Actividades, MSPAS, El Salvador, 1984, 9 pp.

36. Establecimientos y Servicios de Salud, 1982, MSPAS, El Salvador, 1983, 35 pp.

MAP



FIVE HEALTH REGIONS OF EL SALVADOR

Source: Ministry of Health, Government of El Salvador

TABLES

TABLES

I. Ten Primary Causes of Death — 1981 and 1977

II. Deaths in Children Less than Five Years of Age -- 1976-1982

III. Maternal Mortality — 1978-1982

IV. Ten Primary Causes of Transmissible Illnesses -- 1983

V. Birth, Deaths and Natural Growth of Population — 1979-1983

VI. National Plan of Basic Rural Sanitation — 1983

VII. Epidemiologic Report of Preventable Infectious Diseases — 1978-1982

VIII. Plan Salud — 1985-1989

TABLE I

Ten Primary Causes of Death

El Salvador

1981 and 1977

Order	Causes	DEATHS Number 1981	Number 1977	% of Total 1981	% of Total 1977	% Medically Certified 1981	% Medically Certified 1977
	TOTAL	37,468	33,031	100.0	100.0	47.5	38.9
1	Certain conditions originating in the perinatal period	4,095	853	10.9	2.6	29.6	58.2
2	Intestinal infections due to specific organisms and those which are ill-defined	2,396	4,277	6.4	12.8	23.7	22.5
3	Homicides and injuries inflicted by other persons	1,881	1,613	5.0	4.9	86.7	99.4
4	All accidental causes	1,352		3.6		75.4	
5	Bronchitis, emphysema and asthma	1,013	1,299	2.7	3.9	15.9	16.6
6	All malignant tumors in all locations including leukemia	966	850	2.6	2.6	75.4	59.8
7	Motor vehicle accidents	851	796	2.3	2.4	87.4	99.1
8	Cerebral vascular accidents	851	831	2.3	2.5	51.7	46.6
9	Diseases of the heart	773		2.1		25.2	
10	Diseases of pulmonary circulation and other forms of heart disease	793	1,013	2.1	3.1	52.1	32.1
11	Pneumonia in all forms		1,275		3.9		57.8
12	Measles		805		2.4		18.3

N.B. Not all conditions are described in the same words for 1977 and 1981. 1981 descriptions are used for causes of death, resulting in possible combination or separation of categories (i.e. "Other Forms of Heart Disease" in 1977 may be equivalent to both "Diseases of the Heart" and "Diseases of Pulmonary Circulation and Other Forms of Heart Disease" in 1981, signifying an increase--rather than a decrease--in heart disease between 1977 and 1981.)

TABLE II

Deaths in Children Less than Five Years of Age

El Salvador

1976-1982

Year	Infant Mortality No.	Infant Mortality Rate*	Proportional Mortality in Children Less than Five Years of Age as a Percent of All Deaths: Deaths Total All Ages	Deaths Less than Five Years	%
1976	9,154	55.2		12,676	41.1
1977	10,529	59.3		13,958	42.3
1978	8,790	50.8		11,263	36.7
1979	9,232	53.0	32,936	12,094	36.7
1980	7,138	42.0	38,967	9,211	23.6
1981	7,183	44.0	37,468	10,271	27.4
1982	6,624	42.2	33,309	8,934	26.8

Source: General Office of Statistics and Census
*Rate per 1,000 live births

TABLE III

Maternal Mortality

El Salvador

1978 - 1982

Year	Entire Country	
	No.	Rate*
1978	132	0.8
1979	150	0.9
1980	120	0.7
1981	101	0.6
1981	101	0.7

Source: General Office of Statistics and Census
*Rate per 1,000 births

TABLE IV

Ten Primary Causes of Transmissible Illnesses

El Salvador

1983

Causes	No. of Cases	Rate per 1,000 Inhabitants
1. Diarrheal illnesses	122,080	2,334.6
2. Intestinal parasites	120,483	2,304.0
3. Influenza and grippe	83,214	1,591.3
4. Malaria	65,407	1,250.8
5. Amoebic dysentery	7,617	145.6
6. Gonorrheal infection of the genitourinary tract	5,957	113.2
7. Varicella	4,289	82.0
8. Syphilis	4,025	76.9
9. Dengue	3,814	72.9
10. Hemorrhagic conjunctivitis	2,953	56.4

Source: Annual Epidemiologic Report 1983

TABLE V

Births, Deaths and Natural Growth

of Population

El Salvador

1979 - 1983

Year	Births		Deaths		Population Growth	
	No.	Rate*	No.	Rate*	No.	Rate**
1979	174,183	39.3	32,936	7.4	141,247	3.19
1980	169,930	37.7	38,967	8.6	130,963	2.91
1981	163,305	35.6	37,468	8.2	125,837	2.71
1982	156,807	30.7	33,309	6.5	123,498	2.42
1983	-	-	-	-	-	-

Source: General Office of Statistics and Census
*Rate per 1,000 population
**Rate per 100 population

TABLE VI

National Plan Of Basic Rural Sanitation

Coverage With Potable Water Services In 1983

El Salvador

	Number	Percent
Localities with water	841	
Localities without water	1,215	
Rural localities (total)	2,056	
Percent coverage		41%
Rural population with water	1,197,781	41%
Rural population without water	1,669,505	59%
Rural population — 1983 (total)	2,867,286	100%

Source: PLANSABAR

TABLE VII

Epidemiologic Report of Preventable Infectious Diseases

El Salvador

1978 - 1982

Year	Measles	Diptheria	Tetanus	Whooping Cough	Polio	T.B.
Vaccinations						
1978	170,714	221,051	366,506	146,555	148,355	282,273
1979	180,223	223,495	362,808	151,325	151,482	272,903
1980	117,345	142,659	25,237	103,487	103,068	192,777
1981	128,540	187,734	308,810	111,980	101,858	211,181
1982	130,663	218,233	360,531	115,841	115,830	388,845
Illnesses						
1978	1,621	1	122	2,362	10	2,449
1979	10,371	-	114	812	3	2,281
1980	2,315	2	98	1,005	55	2,255
1981	12,554	1	122	3,932	52	2,091
1982*	3,651	22	138	1,754	16	2,161
Deaths**						
1978	68	5	181	139	15	223
1979	511	5	181	80	10	209
1980	120	6	93	76	37	200
1981	611	6	50	150	26	199
1982	209	10	61	77	....	194

Source: Vaccinations, Cases and Deaths: MSPAS
*In Some Cases (e.g. Measles) Based on Incomplete Data
**Reported Deaths in Some Cases Exceed Reported Illnesses

TABLE VIII

PLAN SALUD -- 1985-1989

PLAN SALUD 1985-1989

PRIORIDADES	PROGRAMA		SUBPROGRAMA		ACTIVIDADES	RESPONSABILID
1- Medio Ambiente	Saneamiento Básico	ATENCION PRIMARIA	- Letrinización - Agua Potable - Basuras - Vectores - Contaminac. Ambiental	SALUD	- Atención Primaria - Promoción - Educación en Salud	Intra y extra secto
	Nutrición		- Política Aliment. Nac.		- Promoción - Protección - Recuperación	Multisectorial
2- Atención Médica Integral	Epidemiología		- Enf. transmisibles y no transmisibles		- Atención Primaria - Inmunización - Educación en Salud	Intrasectorial principalmente
	Atención Médica		- Atenc. Infantil - Atención Materna - Adultos - Salud Mental		- Atención Primaria - Consulta externa - Hospitalización - Educación en Salud	
3- Desarrollo de los Recursos	Inversiones		1- Desarrollo de RR.HH	EDUCACION	- Planificación - Planif. y Adiestram. de RR.HH. - Utilización	Intrasectorial
			2- Desarrollo Recursos Físicos		- Ampliación de Infraestructura.	
			3- Desarrollo Administrativo Financiero		- Reorganización del MSPAS. - Reorganización del Sistema de Salud - Adecuación y compatibilización de la legislación y reglamentación vigente - Racionalizar usq de los recursos físicos y financieros.	Intra y extra secto

TABLE VIII

26/Julio/84

APPENDICES

APPENDICES

I. Background Information on Health Sector Policy and Program Review

II. AID Personnel Procurement Notice for Public Health Epidemiologist, USAID, July, 1984

III. Current and Proposed Organizational Charts -- MSPAS

IV. General Budget Law — 1984: Government of El Salvador

V. Weekly Epidemiology Report, Ministry of Health, May, 1984

VI. Daily Activity Reports — Site Visit to El Salvador, August 13-25, 1984

VII. Medical Curriculum -- 1984: University of El Salvador and Evangelical University Medical Schools

VIII. Role of US/AID--Suggested Directions

IX. Missing, Killed and Imprisoned Persons — University of El Salvador Medical School, 1980-1983

X. Curriculum Vitae—Andrew W. Nichols, M.D., M.P.H.

APPENDIX I

BACKGROUND INFORMATION ON HEALTH SECTOR POLICY AND PROGRAM REVIEW

REQUEST OF AID/EL SALVADOR

University Research Corporation was contracted to provide an independent consultant for a health sector policy and program review for AID/El Salvador. The reason for this visit grew out of discussions relating to an existing project (Health Systems Vitalization) and preliminary planning for follow-up projects in the health sector. The statement of work for the consultation is described in Section II of the report and the AID Procurement Order reproduced as Appendix II.

1. Health Systems Vitalization Project (VISISA)

The health systems vitalization project is a major undertaking by AID/El Salvador to restore a health system damaged by conflict and economic disruption to an acceptable level of operation. This two year 25 million dollar (from AID) project is designed to provide emergency assistance, as well as establish a supply and ordinance infrastructure, which will strengthen the ability of the Ministry of Health (Ministerio de Salud Publica y Asistencia Social—MSPAS) to fulfill its dual mission of public health protection and health services delivery.

The mission of the project, as visualized by AID/El Salvador, is provided in the project paper providing the program rationale. This states:

> "In summary, the project strategy is to rapidly infuse the health system with critically needed pharmaceuticals, supplies, equipment, vehicles, (including ambulances) and training and delivery of emergency medical services while simultaneously assisting the Ministry to strengthen the necessary support systems such as support management, procurement, malaria and drug quality control, maintenance and management information which are integral parts of preventive and curative health service delivery systems." (3)

In part, because of this emphasis on commodities and emergency support for the Salvadoran health system, the project has come under criticism from several individuals and groups in the United States. (A more complete review of VISISA may be found in Section VIII-A.)

2. Correspondence from Representative Clarence Long

Hearings were held concerning VISISA and A.I.D./El Salvador in the Congress by Representative Clarence Long, Chairman of the sub-committee on Foreign Operations of the U.S. House of Representatives. As a result of these hearings, Representative Long directed a letter to Secretary of State George Schultz on August 5, 1983, in which he approved the continuation of the El Salvador Health Systems Vitalization Project subject to four conditions. These included: the early reopening of the Medical School at the University of El Salvador; the submission of a report concerning the appropriateness of, and need for, funding medical and health services for displaced persons through private

voluntary organizations; and a requirement that AID report back to the committee within 30 days on the legal status of individual medical personnel being held in prison by the Government of El Salvador.

The fourth condition in the letter provided the basis for the present consultation. It states as a requirement, that:

> "AID establish an independent oversight committee composed of experts in international health and primary care, including individuals selected by the National Academy of Sciences. This oversight committee should:
>
> > examine overall health needs of the people of El Salvador;
> >
> > review and evaluate existing and proposed health programs;
> >
> > make recommendations pertaining to the provision of health services in El Salvador and the AID health program.
>
> "This oversight committee should also address the need to train new paramedics and upgrade the skills of nurses and other health personnel. Further comments should recommend measures to insure the medical neutrality between the waring factions is respected and that medical and health care personnel not be subject to harrassment, illegal arrest or disappearance". (5)

It appears from this condition that Representative Long wished to assure an independent evaluation of the health needs of El Salvador and the relationship of AID health programs to these needs. It is also clear that Representative Long felt that particular attention should be paid to the training of paramedics, nurses and other health personnel. Finally, Representative Long expressed concern about the impact of armed conflict on the health system of El Salvador and, particularly, on health personnel working in that system.

3. Criticism of Dr. Richard Goldstein

Among those who have been concerned about the direction of the AID program in El Salvador is Dr. Richard Goldstein, Clinical Instructor of Medicine at New York University Medical Center and Chairman of the Sub-committee on Latin America of the Human Rights Committee for the New York Academy of Sciences.

Dr. Goldstein's concerns, together with those of Dr. Alfred Gellhorn and Dr. Robert Lawrence, are summarized in a paper prepared for the International League for Human Rights and Aesculapius International Medicine, dated January 20, 1984.

This document, "Humanitarian Assistance to El Salvador--Health Related Issues," describes the Health Systems Vitalization project as "fatally flawed." The paper goes on the conclude that:

> "The Agency for International Development's program, as constituted, fails to address the problem in their totality.... A $25 million program for health in El Salvador should be a significant step in providing humanitarian assistance to that war-torn country. Unfortunately, AID has demonstrated an inability to effectively design or implement such a project". (7)

In addition to critisizing program design, the paper critisizes AID's posture in responding to the Congressional mandate that an independent oversight committee be established to monitor program activities.

Another major concern outlined in the paper is the author's belief that the infrastructure for health service delivery in El Salvador has essentially collapsed. The paper notes that assessment by "other investigators" indicates that many of the health posts and units claimed to be open and functional by the Ministry of Health are, indeed, closed. A footnote regarding this concern states:

> "Evidence substantiating the findings that a majority of Health Posts are actually not functioning has been uncovered by Dr. Goldstein and Dr. Susser. Additional evidence is found in the already cited Centers for Disease Control reports." (7)

The paper therefore concludes that "AID's assumption that this infrastructure is largely intact is not supportable, and their plans to rely on it for implementation of the 'Health Systems Vitalization' project are not tenable." (7)

4. Response of AID

In a letter dated October 20, 1983, Mr. Peter McPherson, Administrator for AID in Washington, responded to Representative Long's concerns. In addition to dealing with the first three above mentioned issues, he addressed the concern about oversight of the health system performance. Here, Mr. McPherson stated:

> "We will substantially expand the scope of the project's evaluation to include: (a) examination of all health needs of the Salvadoran people; (b) review and evaluation of existing and proposed AID health projects; (c) recommendations on providing health services in El Salvador; (d) assessment of the need to train new paramedics and upgrade the skills of nurses and other health personnel." (6)

With regard to the question of the oversight committee, Mr. McPherson responded that AID believes it proper to follow normal

competitive bidding procedures rather than seeking services directly from the National Academy of Sciences, as recommended in Representative Long's letter. Mr. McPherson did, however, state that the National Academy of Sciences would be asked to respond along with other potential bidders. (In fact, according to AID/El Salvador, the Academy chose not to bid on the project and University Research Corporation was finally chosen to implement the activities outlined in Mr. McPherson's letter to Representative Long.)

5. Relation to Health Manpower Study

Since implementation of the response to Representative Long had two component parts, both contracted to University Research Corporation, it is important to distinguish them at this time. The first primarily addresses health manpower issues and resulted in formation of a three person team, including a physician, a nurse and a statistician. The visit of this team overlapped the time of the present study, making it possible for preliminary findings of the health manpower team to be included in this report. Because a study of this subject was occurring simultaneously, the present report limits its consideration of health manpower issues to those directly concerned with the final recommendations of the report. (See Section VIII-B-3.) More information concerning health manpower needs in El Salvador may be obtained from consulting the report of the health manpower study group.

6. Potential Impact on AID Program

Since the Health Systems Vitalization study has two evaluations built in (mid-term and final), the emphasis of the present study is on looking at proposed AID health projects rather than review and evaluation of the existing activities. The study also addresses items (a) and (c) in Mr. McPherson's letter—examination of health needs in El Salvador and recommendations on providing health services to that country. The clear intent of the study is to set the stage for the design of future AID health projects in El Salvador. This is the mandate of the statement of work outlined for the individual chosen to implement the study.

APPENDIX II

AID PERSONNEL PROCUREMENT NOTICE FOR PUBLIC HEALTH EPIDEMIOLOGIST

USAID, July, 1984

PROCUREMENT ORDER FOR EL SALVADOR HEALTH SECTOR POLICY AND PROGRAM REVIEW

"a) review PAHO, World Bank, and IBRD data on health status in El Salvador.

"b) review locally available health status indicators, in an appropriate time frame to permit trend analysis.

"c) assess the present MOH system for collection, processing and analysis of data for calculation of health status indicators.

"d) perform independent, unannounced site visits to try to find samples of health services delivery points in all levels of the health system, to observe categories and frequency distribution of morbidity being seen and make qualitative comments and, as far as possible, quantitative judgements on the quality of care provided against standards suggested by (a) and (b) above.

"e) review MOH resource allocation. (Human, material and financial) and comment on programmatic 'fit' with the priority health problems.

"f) develop tentative prioritized recommendations on problem areas AID may wish to address in future project assistance to the MOH. These recommendations can be subsequently confirmed, re-ordered in priority or discarded by the mid-term and final evaluation plan for the health systems vitalization project.

"g) return to El Salvador 10 to 11 months later to perform a mid-term evaluation of progress toward policy and program re-orientation, as well as changes in resource allocation in accordance with priority health problems.

"h) perform an end of project evaluation 8 to 9 months later which documents project achievements and which provides the GOES and USAID recommendations for future assistance in the health sector." (8)

APPENDIX III

CURRENT AND PROPOSED

ORGANIZATIONAL CHARTS

MINISTRY OF HEALTH

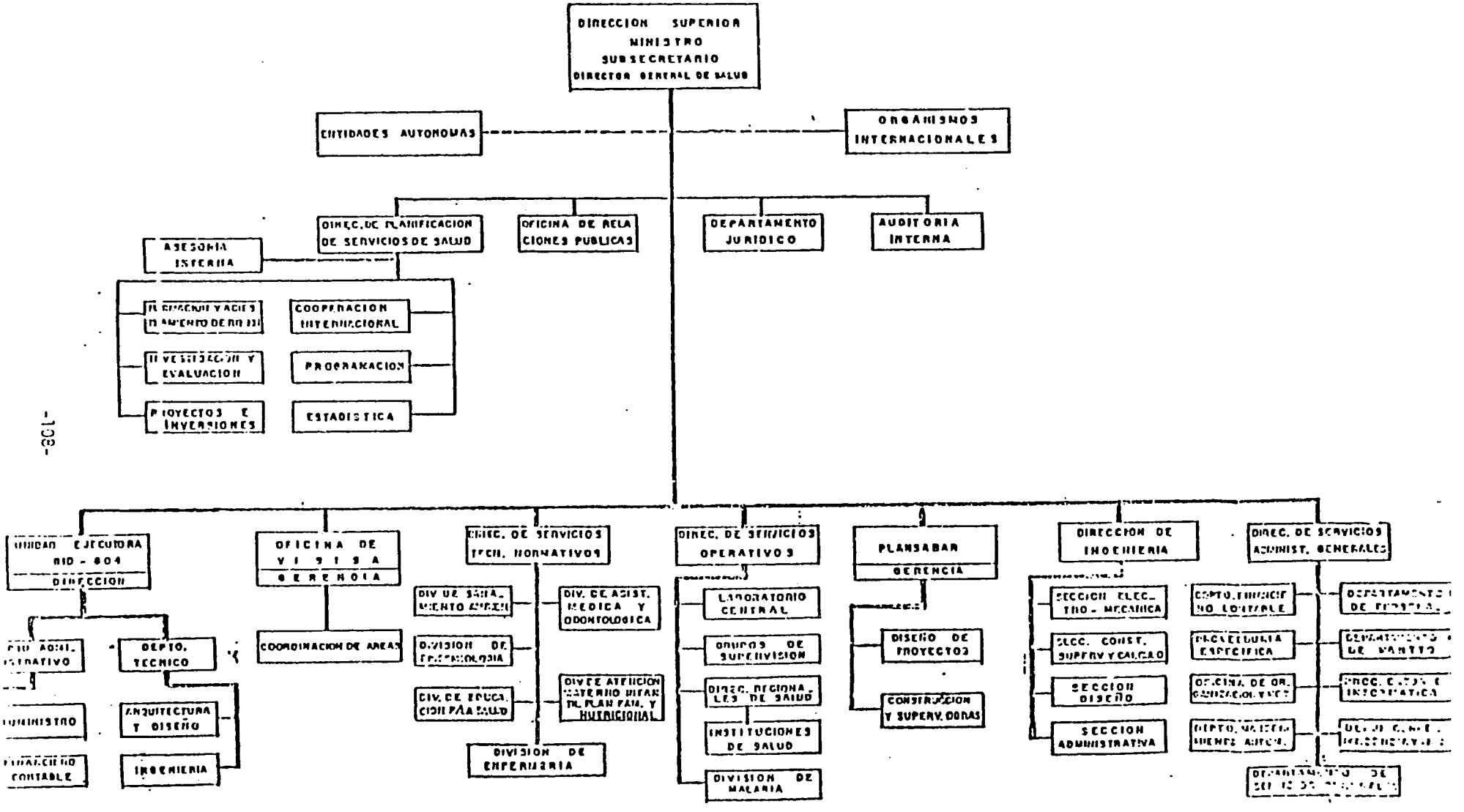
AUGUST, 1984

CURRENT ORGANIZATIONAL CHART

MSPAS

August, 1984

ORGANIGRAMA DEL MINISTERIO DE SALUD PUBLICA Y ASISTENCIA SOCIAL



PROPOSED ORGANIZATIONAL CHARTS

MSPAS

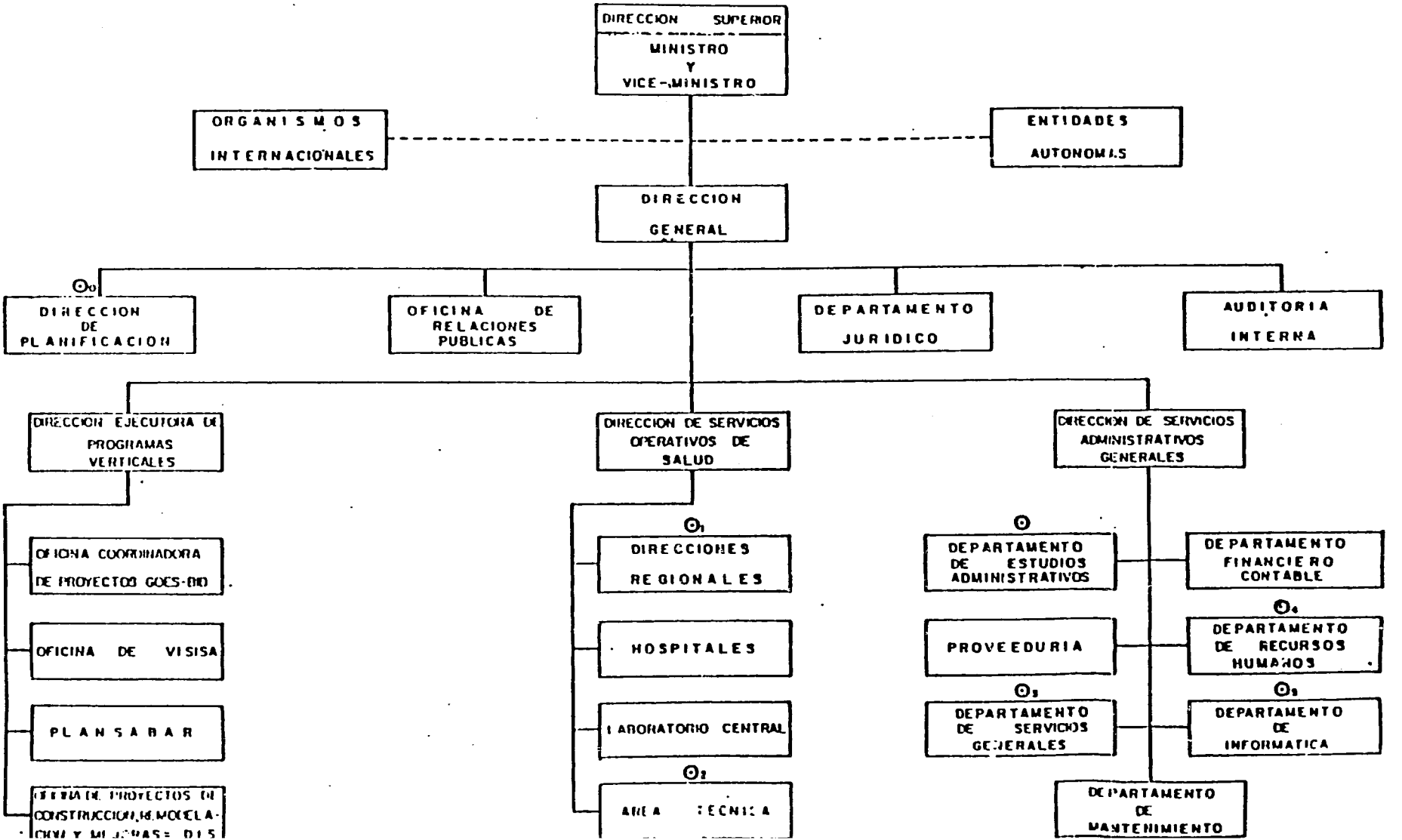
August, 1984

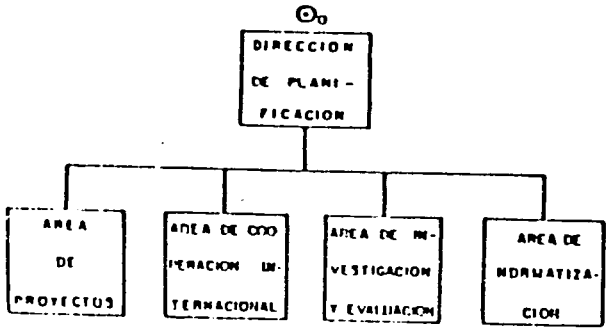
IMPORTANT NOTE CONCERNING PROPOSED ORGANIZATIONAL CHARTS

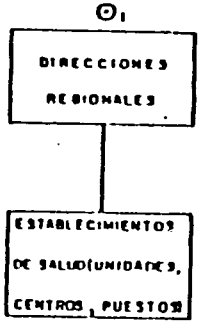
MINISTRY OF PUBLIC HEALTH AND SOCIAL ASSISTANCE

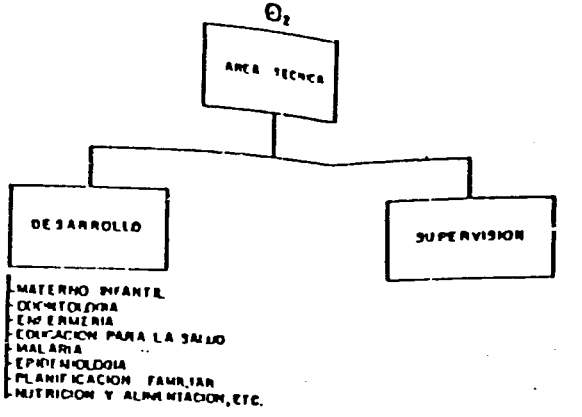
These charts are preliminary in nature and should be taken as planning tools rather than definitive suggestions for future organizational patterns.

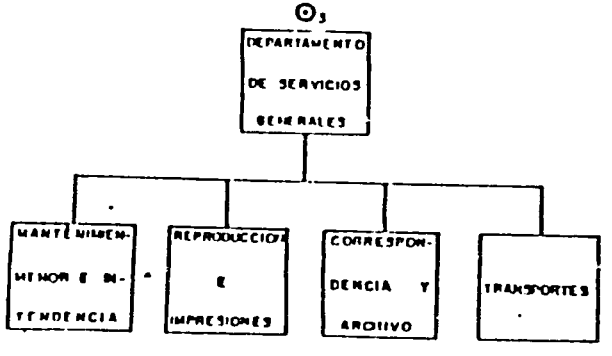
ORGANIGRAMA DEL MINISTERIO DE SALUD PUBLICA Y ASISTENCIA SOCIAL

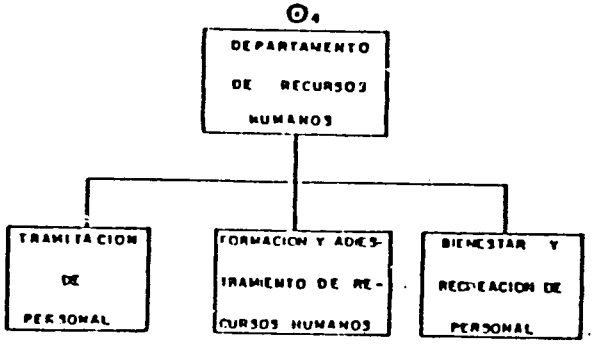


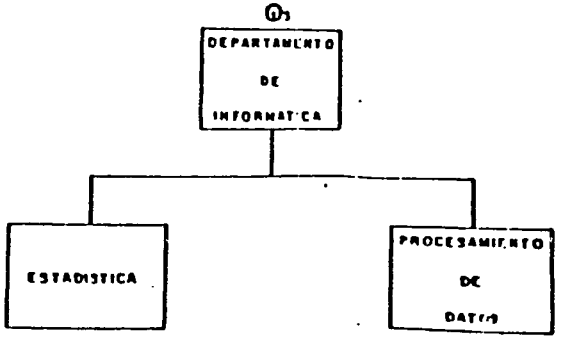

Θ0
DIRECCION DE PLANIFICACION
AREA DE PROYECTOS
AREA DE COOPERACION INTERNACIONAL
AREA DE INVESTIGACION Y EVALUACION
AREA DE NORMATIZACION


Θ1
DIRECCIONES REGIONALES
ESTABLECIMIENTOS DE SALUD(UNIDADES, CENTROS, PUESTOS)


Θ2
AREA TECNICA
DESARROLLO
SUPERVISION
-MATERNO INFANTIL
-ODONTOLOGIA
-ENFERMERIA
-EDUCACION PARA LA SALUD
-MALARIA
-EPIDEMIOLOGIA
-PLANIFICACION FAMILIAR
-NUTRICION Y ALIMENTACION, ETC.

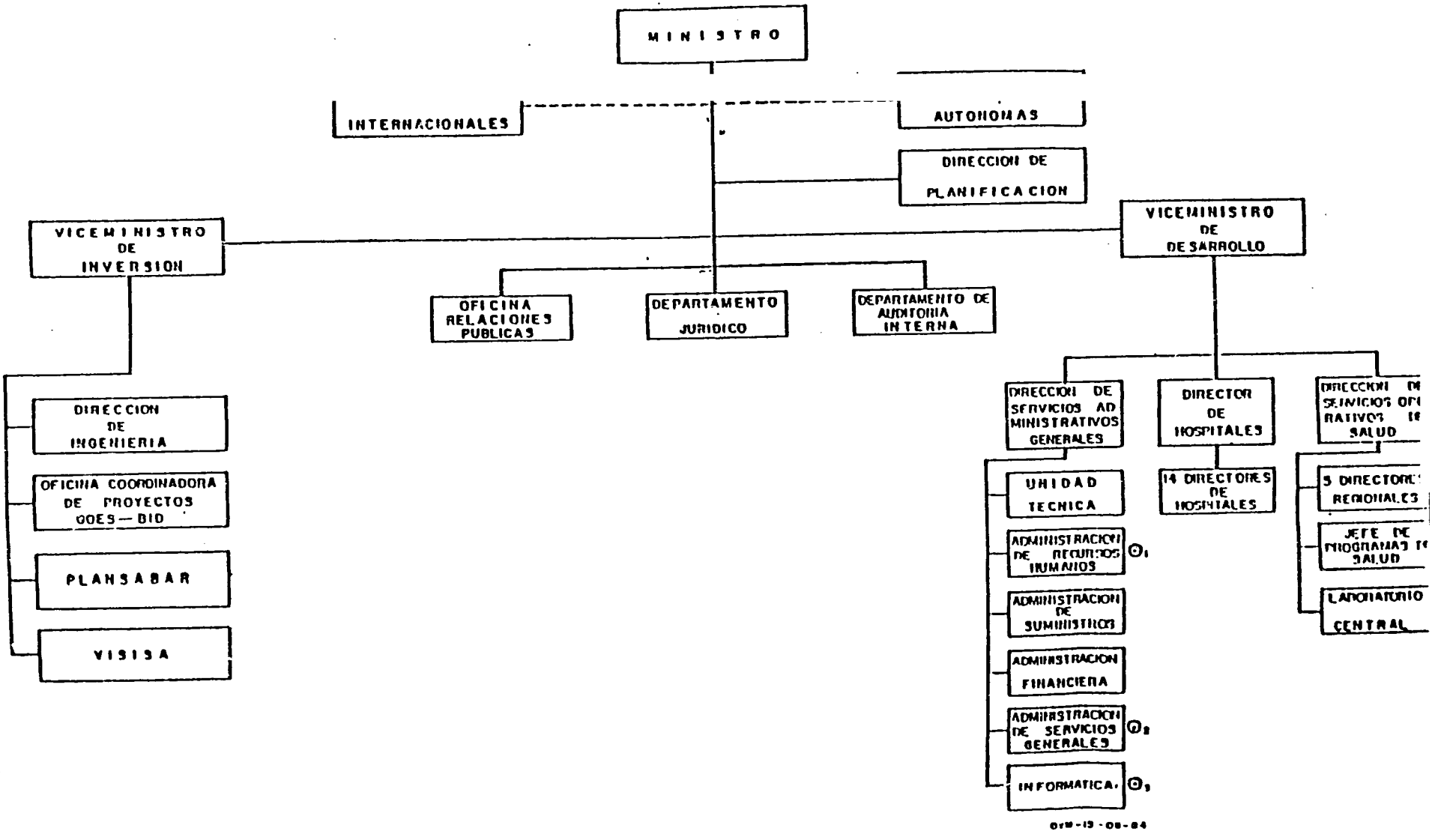

Θ3
DEPARTAMENTO DE SERVICIOS GENERALES
MANTENIMIENTO MENOR E INTENDENCIA
REPRODUCCION E IMPRESIONES
CORRESPONDENCIA Y ARCHIVO
TRANSPORTES

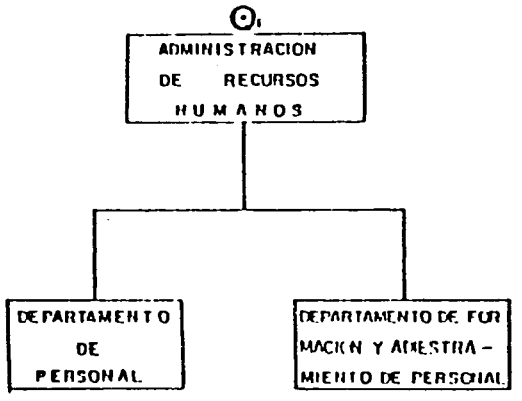

Θ4
DEPARTAMENTO DE RECURSOS HUMANOS
TRAMITACION DE PERSONAL
FORMACION Y ADIESTRAMIENTO DE RECURSOS HUMANOS
BIENESTAR Y RECREACION DE PERSONAL

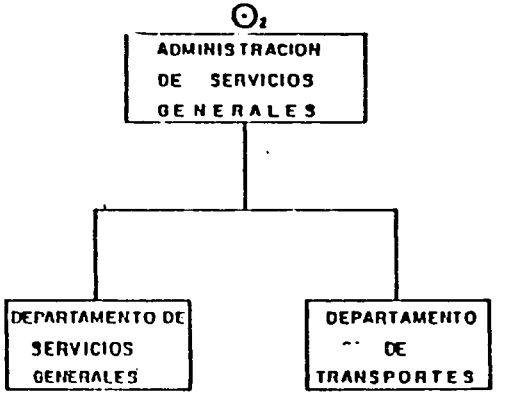

Θ5
DEPARTAMENTO DE INFORMATICA
ESTADISTICA
PROCESAMIENTO DE DATOS

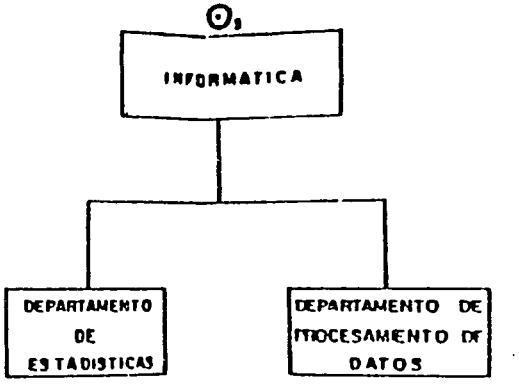
ALTERNATIVA 2

ORGANIGRAMA DEL MINISTERIO DE SALUD PUBLICA Y ASISTENCIA SOCIAL




ADMINISTRACION DE RECURSOS HUMANOS
DEPARTAMENTO DE PERSONAL
DEPARTAMENTO DE FORMACION Y ADIESTRAMIENTO DE PERSONAL


ADMINISTRACION DE SERVICIOS GENERALES
DEPARTAMENTO DE SERVICIOS GENERALES
DEPARTAMENTO DE TRANSPORTES


INFORMATICA
DEPARTAMENTO DE ESTADISTICAS
DEPARTAMENTO DE PROCESAMIENTO DE DATOS

APPENDIX IV

GENERAL BUDGET LAW -- 1984

GOVERNMENT OF EL SALVADOR

MINISTERIO DE HACIENDA
DIRECCION GENERAL DEL PRESUPUESTO
EL SALVADOR, C. A.

LEY DE PRESUPUESTO GENERAL Y DE PRESUPUESTOS ESPECIALES DE INSTITUCIONES OFICIALES AUTONOMAS

1984

DIARIO OFICIAL

Director: ALONSO MIRA

TOMO Nº 281 | San Salvador, Viernes 23 de Diciembre de 1983 | NUMERO 239

SUMARIO

ORGANO LEGISLATIVO

Página

Decreto Nº 1.—Ley de Presupuesto General y de Presupuestos Especiales de Instituciones Oficiales Autónomas para el ejercicio fiscal de 1984..

(Primera Parte)

Página

Decreto Nº 2.—Ley de Salarios con cargo al Fondo General y Fondos Especiales de Instituciones Oficiales Autónomas 1

Decreto Nº 3.—Disposiciones Generales de Presupuestos 269

(Segunda Parte)

DECRETO Nº 1

LA ASAMBLEA LEGISLATIVA DE LA REPUBLICA DE EL SALVADOR,

en uso de sus facultades constitucionales y a iniciativa del Presidente de la República, por medio del Ministro de Hacienda, previa opinión de los Vice-Presidentes de la República,

DECRETA:

Art. 1.—Vótase la LEY DE PRESUPUESTO GENERAL Y DE PRESUPUESTOS ESPECIALES DE INSTITUCIONES OFICIALES AUTONOMAS para el ejercicio fiscal que se inicia el primero de enero y concluye el treinta y uno de diciembre de mil novecientos ochenta y cuatro, así:

SECCION A

PRESUPUESTO GENERAL

I —SUMARIOS

1) SUMARIO GENERAL

INGRESOS TOTALES

a)	Déficit Financiero Estimado al 31 de Diciembre de 1983	(331.000.000)
b)	Ingresos Corrientes	1.656.752.750
c)	Otros Ingresos para el Financiamiento del Presupuesto de Funcionamiento	361.590.310
d)	Ingresos de Capital	641.098.730
	Total	2.298.441.790

EGRESOS TOTALES

a)	Presupuesto de Gastos de Funcionamiento	1.611.464.970
b)	Presupuesto de Gastos de Capital	686.976.820
	Total	2.298.441.790

5) SUMARIO DE CLASES GENERALES DE GASTO POR PROGRAMAS

CLASES GENERALES / PROGRAMAS	Funcionamiento	Transferencias Corrientes	Inversión	Transferencias de Capital	Deuda Pública	Financiamiento	TOTAL
0-a SALAROS	786.136.390		6.280.860				792.417.250
0-b OTROS SERVICIOS PERSONALES	147.847.090		94.944.090				242.791.180
1 SERVICIOS NO PERSONALES	41.73[illegible].890		27.979.490		214.997.360		284.706.740
2 MATERIALES Y SUMINISTROS	154.767.760		32.395.490		4.000.000		201.163.250
3 MAQUINARIA Y EQUIPO	3.340.200		30.462.090				33.802.290
4 INMUEBLES Y EQUIPO EXISTENTES ..			5.033.520				5.033.520
5 CONSTRUCCIONES, ADICIONES Y MEJORAS POR CONTRATO			188.051.830				188.051.830
6 TRANSFERENCIAS CORRIENTES	5.165.880	189.721.850	2.627.390		52.500.000		250.015.120
7 TRANSFERENCIAS DE CAPITAL				42.777.040			42.777.040
8 DESEMBOLSOS FINANCIEROS			253.970		191.151.000	53.100.000	244.504.970
9 ASIGNACIONES GLOBALES	1.249.550		11.929.050				13.178.600
T O T A L E S	1.150.245.760	189.721.850	399.948.780	42.777.040	462.648.360	53.100.000	2.298.441.790

Best Available Document

4.00 - RAMO DE SALUD PUBLICA Y ASISTENCIA SOCIAL

1) FUNCIONES

- Elaborar, preparar, desarrollar y evaluar los planes y programas nacionales de salud.
- Dictar normas técnicas, medicas y disposiciones que tengan por finalidad la protección de la salud de la población.
- Ejercer el control técnico sobre las actividades de las instituciones, personas naturales y jurídicas en el campo de la salud, velando por el cumplimiento de las leyes, reglamento y normas relativas a la materia.
- Crear, administrar y controlar establecimientos de salud y benéficos; supervisar y asesorar a hospitales, instituciones de protección a ancianos e indigentes y de rehabilitación.
- Realizar, por medio de los organismos correspondientes, las acciones de salud en el ámbito de la medicina preventiva y curativa, proporcionando asistencia médica a todos los habitantes de la República.
- Coordinar las actividades que se ejecutan a través de los servicios de salud y hospitales, con aquellas similares que realizan otras instituciones públicas.
- Dictar las medidas y llevar a cabo las actividades tendientes a la conservación y mejoramiento del medio ambiente.
- Dotar a los establecimientos de salud, de la infraestructura necesaria para la prestación de los servicios médicos.

2) EXPOSICION GENERAL

El Ministerio de Salud Pública y Asistencia Social, dirige y coordina las actividades de los programas de salud mental, epidemiología, modernización y ampliación de la red de establecimientos y servicios de salud, saneamiento ambiental, Programa Nacional de Alimentación y Nutrición, Programa Materno Infantil y Planificación Familiar, etc.

Los objetivos básicos que se pretende alcanzar son los siguientes:

1 - Disminución de la mortalidad en los grupos de mayor sensibilidad, particularmente en el área rural y zonas marginales urbanas;

2 - Reducción de la incidencia de las enfermedades susceptibles de controlarse mediante vacunación o por acciones sobre el ambiente y la educación sanitaria;

3 - Orientar el crecimiento de la densidad poblacional, a fin de armonizarlo con el desarrollo socioeconómico del país;

4 - Reducción de los riesgos de incapacidad, especialmente de los grupos más vulnerables: infantil, pre-escolar, escolar y económicamente activo;

5 - Proteger la salud, con especial atención la de los grupos más vulnerables;

6 - Hacer accesible a la población, una dieta adecuada que permita una mayor utilización biológica de los alimentos;

7 - Mejorar el medio ambiente, reducir la incidencia de enfermedades infecto-contagiosas, evitando la contaminación atmosférica y de los cuerpos de agua;

8 - Atender la salud de la población en forma íntegra, que cubra la salud física mental.

Para alcanzar los objetivos, se pondrán en práctica las siguientes estrategias:

a) Ampliar la cobertura de los servicios de salud en los establecimientos actuales, los que entrarán en funcionamiento y los Ayudantes Rurales de Salud.

b) Mejorar el medio ambiente atendiendo con prioridad los suministros de agua potable, control de vectores y disposición final de desechos;

c) Desarrollar campañas contra las enfermedades susceptibles de control a través de inmunizaciones, tratando de incorporarlas como programas permanentes;

d) Incrementar los esfuerzos para el control de la malaria;

e) Prestar más importancia al programa materno-infantil;

f) Establecer los mecanismos necesarios para que funcione efectivamente el sistema nacional de salud;

g) Atender la formación y capacitación de recursos humanos en forma adecuada;

h) Incrementar los programas de educación sanitaria de la población;

i) Reformar y mejorar los servicios de apoyo administrativo a nivel institucional.

3) FINANCIAMIENTO POR PROGRAMAS

		Fondo General	Préstamos Internos	Préstamos Externos	T o t a l
1.01	Administración Superior	654.720			654.720
1.02	Servicios Administrativos Generales	20.598.130			20.598.130
1.03	Planificación de los Servicios de Salud.	2.135.180			2.135.180
1.04	Ingeniería de Salud	774.750			774.750
1.05	Servicios Técnicos Normativos	1.351.470			1.351.470
1.06	Servicios Operativos de Salud	46.914.310			46.914.310
2.01	Financiamiento para Gastos de Funcionamiento de Instituciones Autónomas y Otras Entidades	72.650.070			72.650.070
3.01	Ampliación de la Red de los Servicios de Salud		14.415.500	30.922.900	45.338.400
3.02	Construcciones, Ampliaciones y Mejoras a Edificios del Ramo		3.121.530		3.121.530
3.03	Saneamiento Básico Rural		3.148.960	900.000	4.048.960
3.04	Letrinización		403.000		403.000
3.05	Funcionamiento de los Programas de Inversión del Ramo		1.299.770		1.299.770
3.06	Nutrición		150.000		150.000
3.07	Construcción Edificio para Centro "Sara Zaldívar"		805.550		805.550
	Totales	145.078.630	23.344.310	31.822.900	200.245.840

4) CLASES GENERALES DE GASTO POR PROGRAMAS

	0-a	0-b	1	2	3	4	5	9	T o t a l
1.01	543.810	69.100	26.070	13.320			2.420		654.720
1.02	2.135.930	1.515.930	413.000	16.531.330			1.940		20.598.130
1.03	1.776.310	131.650	80.330	146.890					2.135.180
1.04	482.520	215.190	5.680	69.500			1.860		774.750
1.05	1.212.820	69.570	56.380	12.700					1.351.470
1.06	35.126.520	9.034.190	451.830	2.291.980			9.790		46.914.310
2.01							72.650.070		72.650.070
3.01		639.400	2.585.000	25.000	7.262.130	28.129.710		6.697.160	45.338.400
3.02		586.250		346.000	127.230	739.050		1.323.000	3.121.530
3.03		2.884.100	81.000	773.360	300.000		10.500		4.048.960
3.04		403.000							403.000
3.05	569.030	649.780	10.000	70.960					1.299.770
3.06			150.000						150.000
3.07								805.550	805.550
Totales	41.846.940	16.198.160	3.859.290	20.281.040	7.689.360	28.868.760	72.675.580	8.825.710	200.245.840

RAMO DE SALUD PUBLICA Y ASISTENCIA SOCIAL

5) CLASIFICACION ECONOMICA-SECTORIAL

	Desarrollo Social	Desarrollo de la Infraestructura	Total
GASTOS CORRIENTES	145.077.390	1.240	145.078.630
Gastos de Consumo	72.412.550		72.412.550
Remuneraciones	52.313.540		52.313.540
Compra de Bienes y Servicios	20.099.010		20.099.010
Transferencias	72.664.840	1.240	72.666.080
Al Sector Privado	16.010	1.240	17.250
Al Sector Público	72.648.830		72.648.830
GASTOS DE CAPITAL	53.627.630	1.539.580	55.167.210
Inversión Real	53.617.130	1.539.580	55.156.710
Equipo	7.389.360	300.000	7.689.360
Obras y Construcciones	46.227.770	1.239.580	47.467.350
Transferencias	10.500		10.500
Al Sector Privado	10.500		10.500
Totales	198.705.020	1.540.820	200.245.840

6) DETALLE DE PROGRAMAS

PROGRAMA 1.01: ADMINISTRACION SUPERIOR
UNIDAD EJECUTORA: Secretaría de Estado

a) DESCRIPCION DEL PROGRAMA

Objetivo:

Atender la política de salud a realizar por el Estado y ejercer las facultades y obligaciones que correspondan al Poder Ejecutivo en lo que respecta a la salud pública y asistencia social.

Descripción de Acciones:

Dirigir, coordinar, evaluar y fiscalizar las actividades de las dependencias que integran el Ministerio, y las de Instituciones Autónomas pertenecientes al Ramo; controlar la ejecución de los convenios de asistencia técnica celebrados con organismos internacionales.

b) ASIGNACION PRESUPUESTARIA

04-500-22-101-22-101-009 Administración Superior 654,720

c) CLASES GENERALES DE GASTO

	0-a	0-b	1	2	6	Total
009	543.810	69.100	26.070	13.320	2.420	654.720

REPORTE EPIDEMIOLOGICO SEMANAL

INFORMANTE: Dirección Gral. de Salud

LOCALIDAD: REPUBLICA DE EL SALVADOR

MES MAYO

SEMANAS: 18 - 22
DEL: 29 Abril al 2 Junio 1984

Cifras provisionales relacionadas con las de 1983 en el mismo período.

ENFERMEDAD	TOTAL 1- 17 SEMANA 1984	SEMANA 18a	SEMANA 19a	SEMANA 20a	SEMANA 21a	SEMANA 22a	TOTAL AÑO 1984	TOTAL 1-21 SEMANA 1983
Fiebre Tifoidea y Paratifoidea (a+b)	1694c	339	250	374	235	277	3169	1256
a- Casos clínicos	1451c	264	191	276	166	213	2561	1032
b- Casos confirmados	243c	75	59	98	69	64	608	224
Intoxicación aliment.	141	9	8	21	8	6	193	213
Absceso hepático amib.	40c	1	2	2	1	-	46	55
Disentería amibiana sin mención de absceso hepático	2379c	134	139	131	154	127	3064	3369
Enfermedad Diarreica (1+2)	36498c	1563	1740	1816	2700	2610	46927	47566c
1- Disentería no especificada	1687c	75	84	71	215	113	2245	2340c
2- Diarreas, Gastroenteritis y Colitis y Otras	34811c	1488	1656	1745	2485	2497	44682	45226
Tuberculosis pulmonar	563c	-	-	-	-	104	667	874
Carbunco	-	-	-	-	-	-	-	-
Brucelosis	-	-	-	-	-	-	-	-
Lepra	1	-	-	-	-	-	1	-
Difteria (a+b)	9	-	-	-	-	-	9	10
a- Casos clínicos	3	-	-	-	-	-	3	3
b- Casos confirmados	6	-	-	-	-	-	6	7
Tosferina	135c	11	11	12	16	10	195	187
Meningitis meningocócica	35	-	2	-	-	-	37	21
Otras meningitis	60c	3	2	3	1	-	69	64
Tétanos (a+b)	36	1	2	1	1	5	46	34
a- Tétanos neonatorum	9	1	2	1	-	1	14	14
b- Otras formas de tét.	27	-	-	-	1	4	32	20
Poliomielitis aguda paralítica (a+b)	6	-	-	-	-	-	6	35
a- Casos clínicos	4	-	-	-	-	-	4	25
b- Casos confirmados	2	-	-	-	-	-	2	10
Varicela	2465c	192	152	134	184	112	3239	2651c
Sarampión	1411c	73	84	48	99	64	1779	989
Rubeola	127	4	12	6	6	1	156	762
Dengue	227c	8	11	4	11	4	265	1316c
Hepatitis Infecciosa	825c	39	36	38	42	35	1015	835
Rabia	12	1	-	1	-	1	15	10
Parotiditis epidémica	708c	40	33	39	28	24	872	970c
Conjuntivitis hemorrágica	915c	24	48	38	49	25	1099	1295c

...

ENFERMEDAD	TOTAL 1- 17 SEMANA 1984	SEMANA 18a	SEMANA 19a	SEMANA 20a	SEMANA 21a	SEMANA 22a	TOTAL AÑO 1984	TOTAL 1 -21 SEMANA 1983
Paludismo	10190	648	550	829	682	750	13649	20504
Sífilis (1+2+3+4)	1425c	71	63	42	95	88	1784	1729
1- Sífilis congénita	17	-	1	-	-	-	18	9
2- Sífilis adquirida precoz sintomática (a+b)	817c	38	41	26	56	52	1030	925
a- Sífilis primaria	715c	35	37	24	51	44	906	789
b- Sífilis secundaria	102c	3	4	2	5	8	124	136
3- Sífilis adquirida precoz latente	411c	22	17	14	29	31	524	498
4- Otras formas de sífilis adquirida	180c	11	4	2	10	5	212	297
Infección Gonocócica aguda del aparato genitourinario	2063c	103	106	98	120	115	2605	2229c
Otras infecciones gonocócicas	365	23	39	16	25	28	496	302
Chancro blando	716c	31	34	29	46	31	887	472
Linfogranuloma venéreo	122	12	7	5	4	5	155	123
Parasitismo Intestinal (1+2+3)	44161c	1870	1879	1838	2479	2315	54542	47223c
1- Otras infestaciones por cestodes	2075c	71	77	37	84	116	2460	2934
2- Anquilostomiasis	1174c	57	78	57	93	66	1525	1483c
3- Otras helmintiasis intestinales	40912c	1742	1724	1744	2302	2133	50557	42806c
Influenza o Gripe	29256c	1514	1520	1348	1704	1651	36993	32575c
Efectos tóxicos por plaguicidas clorados y otros plaguicidas	224	7	10	12	24	38	315	270
Tórsalo	9	-	-	-	-	2	11	10
Escabiosis	3247c	142	127	100	88	59	3763	-

c: Cifras corregidas

MINISTERIO DE SALUD PUBLICA Y ASISTENCIA SOCIAL
DIRECCION GENERAL DE SALUD, DIVISION DE EPIDEMIOLOGIA
EL SALVADOR, C. A.

ACDEB/bre

ANEXO AL REPORTE EPIDEMIOLOGICO SEMANAL DE MAYO

VIGILANCIA EPIDEMIOLOGICA DE DIEZ ENFERMEDADES CON DATOS POR SEMANA (1º.DE ABRIL AL 2 DE JUNIO /1984) DE CASOS NOTIFICADOS COMPARADOS CON LA MEDIANA SEMANAL (CINCO AÑOS) 1979-1983

No. de Semana	LA SEMANA TERMINA	Polio paralítica		Difteria		Sarampión		Tosferina		Fiebre Tifoidea		Rubeola		Parotiditis epidémica		Disent. amibiana y no especific.		Hepatitis Infecciosa		GRIPE	
		C	M	C	M	C	M	C	M	C	M	C	M	C	M	C	M	C	M	C	M
14	7 de abril /84	-	2	-	-	143	61	10	6	151	54	11	26	38	46	267	178	60	38	1473	1486
15	14 "	-	-	-	-	124	72	17	8	195	57	7	4	33	46	226	179	59	44	1505	964
16	21 "	-	-	-	-	50	92	6	15	202	55	1	10	7	46	39	266	12	50	269	2013
17	28 "	1	-	-	-	73	64	9	16	296	63	4	12	28	4	196	252	51	46	1472	1925
18	5 de mayo 1984	-	3	-	-	73	83	11	20	339	79	4	9	40	57	209	275	39	48	1514	1547
19	12 "	-	-	-	-	84	57	11	12	250	81	12	11	33	44	223	258	36	43	1520	1735
20	19 "	-	-	-	-	48	55	12	15	374	86	6	12	39	62	202	318	38	50	1348	1970
21	26 "	-	-	-	-	99	53	16	24	235	79	6	14	28	70	369	347	42	55	1704	1937
22	2 de junio 1984	-	1	-	-	64	51	10	10	277	69	1	14	24	64	240	355	35	47	1651	1876

NOTA: C = Casos M = Mediana

Resultados de la comparación de lo notificado con lo esperado(Medianas semanales) durante los meses de abril y mayo del corriente año.

CASOS DE FIEBRE TIFOIDEA NOTIFICADOS POR SEMANA, EL SALVADOR, 1984

Semana	Mediana	No.de Casos
1	33	30
2	28	47
3	37	42
4	36	40
5	48	37
6	46	60
7	42	69
8	39	64
9	59	74
10	55	104
11	49	93
12	60	97
13	53	92

Semana	Mediana	No.de Casos
14	54	151
15	57	195
16	55	202
17	63	296
18	79	339
19	81	250
20	86	374
21	79	235
22	80	277
23	79	122
24	69	116
25	42	67
26	47	13
TOTAL		3.487

ENFERMEDADES TRANSMISIBLES NOTIFICADAS POR REGIONES DE SALUD

EL SALVADOR, MAYO, 1984

REGIONES	Sarampión	Rubeola	Parotiditis epidémica	Tosferina	Varicela	Dengue	Hepatitis Infecciosa	Sífilis Prim + Sec.	Gonorrea	Fiebre Tifoidea	Diarreas	Tuberculosis	Influenza o Gripe
Occidental	30	1,	10	13	60	2	38	27	37	76	1591	20	594
Central	22	1	35	1	93	11	21	30	47	111	1779	12	1094
Metropolitana	99	16	45	21	309	2	71	42	156	826	2993	28	2428
Paracentral	22	6	22	17	167	6	25	36	48	68	1044	22	854
Oriental	193	1	24	8	80	6	26	48	40	26	1032	22	806
ISSS	2	4	28	-	45	11	9	30	214	368	1990	-	1961
Total Mayo/84	368	29	164	60	774	38	190	213	542	1475	10429	104	7737
Total Mayo/83	171	127	233	33	539	216	164	176	501	393	10095	250	7854
Total Abril/84	396	22	208	50	694	39	192	186	457	845	6535	104	4996
Total Acumul./84	1779	156	872	195	3239	265	1015	1030	2605	3169	46927	667	36993
Total Acumul./83	989	762	970	187	2651	1316	835	925	2229	1256	47566	874	32575

San Salvador, Agosto de 1984.

DIVISION DE EPIDEMIOLOGIA.

acdeb.

COMENTARIO AL REPORTE EPIDEMIOLOGICO SEMANAL, MES DE MAYO

FIEBRE TIFOIDEA Y PARATIFOIDEA:

Hasta la semana 22, (termina 2 de Junio) continuaban en aumento los casos notificados por la red de Servicios del Ministerio y del ISSS; se habían acumulado un total de 3.169 casos contra 1.256 casos a la misma fecha del año 1983, representando esto un incremento del 60.4%. El número de casos por semana sigue siendo notablemente superior a la mediana semanal esperada, por lo que recomendamos al personal de los Servicios de Salud, mantener en alerta a la población, dándoles a conocer las prácticas higiénicas para evitar que contraigan la enfermedad y continuar con la investigación epidemiológica de los casos dictando las medidas adecuadas de control.

RABIA:

Quince casos de rabia humana se han acumulado hasta la semana 22, cifra que es alarmante, si tomamos en cuenta que ya hemos superado el número de casos que se presentaron en los años 1980, 1981 y 1982. En el año 1983 a la misma fecha llevabamos 10 casos acumulados. Si la situación continúa sin ningún control, sobre el principal trasmisor que es el perro, probablemente dupliquemos la cifra acumulada a la fecha.

En consecuencia es de suma importancia que todo los Servicios de Salud de las Regiones planifiquen y ejecuten campañas de eliminación de perros callejeros con el fin de disminuir la población canina, que además de cobrar vidas humanas, representa una agresión a la integridad de las personas y una notable distracción de recursos humanos, físicos y materiales para atender los casos de personas mordidas.

ENFERMEDADES CONTROLABLES POR VACUNACION

SARAMPION:

El número de casos notificados hasta la semana 22 es de 1979, cifra superior a la de 1983 a la misma fecha, representando un incremento de un 45.%, en relación al año anterior; el número de casos por semana ha superado la mediana semanal esperada. La Región Oriental de Salud, es la que está presentando un brote importante de esta enfermedad y solo en el mes de mayo acumuló 193 casos; el municipio de la Región Oriental en el que se ha localizado un importante brote de sarampión, es San Francisco Gotera, cuya situación especial todos conocemos, como lo es la presencia de la gran cantidad de desplazados. Recomendamos a las autoridades de salud de la Región Oriental hacer los esfuerzos necesarios con el fín de inmunizar al mayor número de susceptibles de acuerdo a las posibilidades de realizarlo, tomando en cuenta la situación de conflicto que se vive actualmente.

TODAS LAS REGIONES Y SERVICIOS DE SALUD

POLIOMIELITIS:

Recientemente hemos tenido informaciones extraoficiales del aparecimiento de importantes brotes de poliomielitis aguda paralítica en la zona sur de la República de Honduras, frontera con El Salvador, que ha motivado la realización de una campaña de vacunación contra la polio. Dadas las condiciones de cobertura alcanzadas en nuestro programa de vacunación, recomendamos: Intensificar todas las actividades de vacunación, alertando además a todo el personal de salud para que colaboren y de esta manera evitar daño mayor a nuestra población.

DENGUE

De la Oficina Sanitaria Panamericana hemos recibido el siguiente telex:

" HCE/ELS/1118, 13 de julio de 1984.
CONSIDERANDO RECIENTES AISLAMIENTOS CASOS DENGUE VIRUS TIPO 2 DE HONDURAS Y HAITI Y PELIGRO POTENCIAL NUEVAS EPIDEMIAS DENGUE EN LA REGION, RECOMENDAMOS REFORZAR ENERGICAMENTE ACTIVIDADES VIGILANCIA HUMANA Y AEDES AEGYPTI Y MEDIDAS CONTROL DEL MOSQUITO. OFSANPAN. "

Por lo que estamos alertando a las Regiones de salud para que intensifiquen la vigilancia de la enfermedad y las medidas de control del mosquito trasmisor. Solicitamos además que en casos de presentarse una sospecha de Dengue Hemorrágico notificar de inmediato a la División de Epidemiología, para dictar las medidas adecuadas del caso.-

San Salvador, Julio de 1984.
DIVISION DE EPIDEMIOLOGIA

REHA/acdeb.

APPENDIX VI

DAILY ACTIVITY REPORTS

SITE VISIT TO EL SALVADOR

AUGUST 13-25, 1984

Previous Page Blank

DAILY ACTIVITY REPORT
ANDREW W. NICHOLS, M.D., M.P.H.

August 14, 1984

I began by meeting with the Minister of Health, Dr. Benjamin Valdez H., who welcomed me to El Salvador and agreed to provide a letter of introduction for visits to facilities of the Ministry of Health. Two issues of importance to the AID Mission in El Salvador were then discussed with the Minister by Dr. John A. Massey and staff.

At this point, I was taken by Lic. Jorge Castro, Director of Administration, to meet with Dr. Jose Max Molina, Director General of Health for the Ministry, together with Dra. Ana Isabel Osorio de Lazo and Dr. Jose Antonio Pereira, both affiliated with the Operational Services Division of the Ministry. (Dr. Pereira is Director of this Division, and is, consequently, of equivalent rank to Lic. Castro.)

The burden of the presentation was taken by Dr. Pereira, who proceeded to give an introduction to the Ministry of Health. He noted that there were over 5 million people in the country of El Salvador. 85% of whom were under the direct care of the Ministry of Health. He added that the Ministry had three levels of organization: 1. Central; 2. Regional; and 3. Local.

At the central level of organization he noted that the Ministry was headed by the Minister (Dr. Valdez) and the Vice-Minister (Dr. Gonzalo Beltran Castro), with the Director General for Health (Dr. Jose Max Molina) in operational charge of the Ministry. Each of the five major sectional directors report to him.

According to Dr. Pereira, the five major divisions and their directors are: 1. Planning (Dr. Hugo Moran Quijada); 2. Normative Technical Services (Dr. Eduardo Navarro Rivas); 3. Operational Services (Dr. Jose Antonio Pereira); 4. Health Engineering (Ing. Herman Cortez Andrino); and finally, 5. Administration (Lic. Jorge Castro).

Dr. Pereira then provided some details on the organization of the Normative Technical Services (Servicios Tecnicos Normativos) Division. Together with their directors, the sections within the division include: 1. Epidemiology (Dr. Hernandez); 2. Environmental Sanitation (Ing. Melara); 3. Health Education (Dr. Diaz Nuila); 4. Maternal and Child Health (Dr. Cruz); 5. Nursing (Lic. De Soto) and 6. Dentistry (Dr. Arevalo).

Operational Services are divided by the region of the country. These regions together with their headquarters city and directors as follows: Occidental - Santa Ana (Dr. Carcamo); 2. Central - Santa Tecla (Dr. Contreras); 3. Metropolitana - San Salvador (Dr. Araujo); 4. Paracentral - San Vicente (Dr. Moreira); 5. Oriental - San Miguel (Dr. Alvarenga).

Dr. Pereira went on to add that there are 363 health centers in the country divided into three general classifications: Primary, Secondary and Tertiary. The primary level includes community posts (in the marginal areas of large cities) or health posts (the common name for the lowest level of health outreach in the countryside). Also included in this general level of facilities are health units.

The main difference between health posts and health units is that the former are attended by a nurse and physician only several times per week, but manage on a continuing basis with the assistance of an auxiliary nurse who is always present. Health Units, on the other hand, are staffed on a regular basis by a physician, nurse and support staff. Health Posts are open 2-3 times/week, with resident staffing by a nurse auxiliary. A physician and nurse provide care when the clinic is open. Community posts, which are located in peri-urban areas, are staffed by a nurse only on a 2-3 times/week basis.

Secondary level facilities include regional hospitals and health centers. these are variously staffed to give a higher intensity of care, with multiple physicians constantly in attendance at the health centers. Tertiary level facilities consist of specialty hospitals, all of which are in San Salvador.

In all there are 14 hospitals and 12 health centers in the country. There are 98 health units. Forty seven of the health posts are closed due to the conflict, but the International Committee for the Red Cross is active in the contested zones.

Rural health auxiliaries relate to the health centers. Dr. Pereira stated that, in all 250 have been trained, 60% of whom are paid by the Government and 40% by AID. When I asked if they were still being trained, he responded in the affirmative. (This turned out not to be the case and may have represented a misunderstanding on my part.) He also added that some 350 midwives had been trained since 1980.

When asked where the health auxiliaries get their training, he stated that there were three training enters ("Centros de Capacitacion Rurales") located around the country. The theoretical part of the instruction is there, although practical instruction is given in hospitals. He stated that these centers for training were located in the Western, Central and Eastern zones of the country.

At this point, I asked Dr. Max Molina what he thought of AID health projects, and he responded by saying that the Salvadorans were deeply appreciative of the assistance given by AID and that it has made a substantial impact on the country. He went on to add, however, that AID carries with it much bureaucracy and too many conditions. He stated that it would be better to simplify procedures so that AID did not become involved in matters such as personnel and salaries. He felt these were better left to Salvadorans and were not an appropriate concern to AID. (This is my translation of what was said and may not be completely accurate, since it was spoken in some haste.)

At this point I asked Dr. Molina what suggestions he might have for AID programs in the future and just when he was about to answer, the rest of the AID group entered the room. Consequently, I did not have a response to my question. Since Dr. Molina seems to be a man of strong opinions, I feel confident that he has one of the subject and would offer it if asked again.

After completing needed business at the Embassy, I returned to have an interview with Lic. Jorge Castro, Director of Administration for the Ministry. With him was Dr. David Castro, an assistant.

Lic. Castro began our discussion by taking exception to some of the organizational patterns I had been presented by Dr. Pereira. He pointed out

that the organization structural of the Ministry was in the process of change and presented me with two alternatives in the form of new organizational charts for the Ministry. These were dated August 14 (the day of the meeting). The major change in the revised diagrams was a marked consolidation of units, including the elimination of the Normative Technical Services Division and the consolidation of special progams such as VISISA and PLANSABAR INTO THE Unidad Ejecutora (EID) Unit. This would leave three other operation divisions: 1. Operating Services; 2. Sanitary Engineering; and 3. Administrative Services. He reminded me that the planning division was more a staff activity than a line function and should not be considered equivalent to the other divisions just mentioned. Rather, its role is to serve in an advisory function for the Minister and Vice-Minister.

At this point Lic. Castro brought forth an alternative Five Year Plan for the Ministry to that created by Dr. Moran. He pointed out that, in his opinion, the Moran plan was deficient and, although he was not a physician and had only been in his job for some three months, that the felt he had the skill to put together a more credible and effective plan. He then went on to detail this plan with me. Since he provided a copy of it, I will not specify further its contents. He did add that the plan was "secret" and suggested that it would be inappropriate to share it within the Ministry, but that I could use it in my report.

Subsequent to his presentation of the plan, we entered into a broader discussion of the potential role of AID within the Ministry and what kinds of programs the Ministry might evolve. Lic. Castro stressed the importance of primary care and the necessity for changing the current relationship between the cost of running hospitals (72,650,000 colones) and the cost of operating outreach services (46,914,000 colones). He stated that this ratio should be reversed with more money going to the operating services in the field than to hospitals. His plan, he felt, would make this possible.

He went on to outline his strategy for presentation of the alternative plan. He stated that he would offer it to the Director General for Health, the Minister and the Vice-Minister, with hope that it might be approved in lieu of the prior plan prepared by Dr. Moran. He allowed that there might be some compromise reached between the two when asked if this were a possibility.

We then went into some discussion about President Duarte and his need for major initiatives with which he could be identified by the people of El Salvador. We briefly discussed the concept of "integrated rural development" as an idea that might be used to attract certain other cabinet members to a program which would emphasize health. There were some questions concerning whether health per se could be sold to other Ministers for their collaboration as a major national project for this Administration.

The meeting was quite informative and lengthy, lasting over 2 hours. We agreed to touch base again and I returned to my hotel.

DAILY ACTIVITY REPORT
ANDREW W. NICHOLS, M.D., M.P.H.

August 15, 1984

My first meeting of the day was with Dr. Hugo Moran Quijada, Director of Planning for the Ministry of Health. Dr. Moran, who was initially identified as my host counterpart for this visit, informed me that our projected visit to the School of Medicine could not take place because the Dean was out of town and because it was to be arranged for me by AID. (We had agreed the previous day that it would be the first activity of the morning.) Dr. Moran went on to say that he had meetings with the Minister scheduled for this day, but would be glad to answer any questions that I might have.

He then proceeded to ask me a question. That was, what did I think of his Five Year Plan? Since I had read it in some detail the night before, I was able to affirm my enthusiasm for the directions in which it was headed. I did note, however, that I had three questions or observations concerning it. He asked what these were and I stated them as follows:

1. The plan is highly critical of everything that has gone before (see the historical section of the complete plan as opposed to the abbreviated version made available to me by AID);

2. No budgetary figures were presented or are included in the plan to show what changes it will effect in resource allocations within the Ministry, if any;

3. While the plan states certain goals, it seems to offer a basket of desirable activities without prioritizing them.

These comments led to a general discussion of the plan and its future by Dr. Moran.

He advised me that on August 29, there would be a meeting of the 10 regional health officers (directors), together with 7 division heads, in the Ministry of Health (including himself), the Director General of Health, the Vice-Minister and the Minister of Health. The purpose of this meeting will be to decide the future of the plan. The areas to be considered are the sections on execution and evaluation. The previous sections have already been established within the Ministry. The plan is now in the discussion stage and is subject to some change in the areas mentioned.

Dr. Moran digressed to point out that he is unique within the leadership of the Ministry of Health in that he is not a member of the Christian Democratic Party. He stated that he was asked by the President and the Minister of Health to join the Ministry as Director of Planning because of his qualifications for the job. He feels this works to his advantage.

Mr. Moran went on to point out some of the problems facing El Salvador at this time. These include a high infant mortality rate, a high overall mortality rate, poor immunization coverage, malnutrition, inadequate sanitation, and lack of health education. He stated that these problems are not due to the "Grace of God", but to the mismanagement of resources by men. He stated that

it is time to redirect these resources to produce greater equity in health delivery for all people in El Salvador.

He pointed to some statistics to stress the inequities that currently exit. The Ministry of Health is responsible for the health care of some 4,280,000 Salvadorans and is allocated 40 colones per person per year for this purpose. ISSS, on the other hand, is responsible for the health care of 217,000 Salvadorans and has available to it 400 colones per person per year. ANTEL, with responsibility for 400,000 people, has approximately 60 colones per person per year available. Finally, Bienestar Magisterial has 100 colones per person per year to take care of 75,000 covered individuals. The budget and coverage of Sanidad Militar is unknown for security reasons.

The goals for the health care system in El Salvador, according to Dr. Moran, are 100% coverage for all the people with community participation and improvement in resource allocation. This can be achieved by the initiation of a strong primary health care program which stresses nutrition, sanitation, and medical care. This is what he sees resulting from his plan.

With regard to my questions, he stated that the history of El Salvador to date has, indeed, been negative and it was appropriate to so state. He went on to add that the plan would have budgetary implications and might, for example, reverse the current ratio between hospital and outreach facilities in the MOH budget. He stressed again that the primary objectives of the Ministry under the Plan will be to improve nutrition, sanitation, and medical care in an overall program of primary health care.

My next interview was with Dr. Rolando Edgardo Hernandez, Chief of Epidemiology within the Normative Technical Services Division of the Ministry. Dr. Hernandez stated that the hospitals used to have their own division within the Ministry of Health, but around 1976 these were put in the Operational Services Division so that they might be coordinated with health centers.

When asked why the Normative Technical Services Division was separate from Operational Services, he responded that at times Epidemiology has had to become operational. These are cases where staff must go directly to the field and not wait for the operational structure to function. An example is in rabies control, where it is often necessary to get medical officers into the field immediately.

Dr. Hernandez reviewed the subdivisions within the Normative Technical Services Branch of the Ministry and stated that there were 6 separate activities. These include: Epidemiology, Sanitation, Dental Care, Nursing Services, Health Education and Maternal/Child Health Services.

He then went on to explain in greater detail the programs within the Epidemiology Division. These include epidemiology vigilance, vaccination, diarrhea control and oral rehydration, control of intestinal parasites, control of rabies, control of venereal diseases, and control of tuberculosis - for a total of 7 subdivisions.

He advised me that there were 34 reportable diseases in El Salvador and gave me copies of the report form required of each local service unit. These forms

must be completed in detail and reported weekly to each health region and to the National Epidemiology Office. That office produces an overall epidemiology report once each month for the Ministry.

Dr. Hernandez noted that there are epidemiology stations in each region of the country. He stated that consideration is being given to receiving reports based upon symptoms, but questioned the relative value of such reports. Such reports would be provided by auxiliaries and others who are able to report symptoms, but unable to diagnose. (Editor's note: such a system will be used by Project Hope in displaced persons settlements over the next 3 years.)

When asked what impact the conflict was having on daily reporting, he noted that a certain amount of the lost data was being recaptured in the cities when refugees moved from the contested zones to the urban areas. He did admit, however, that in the 1979-80 period there had been a substantial amount of data lost to the Ministry.

He went on to add some of the goals that he had for immunizations. These included: 1. An 80% immunization rate of DPT-Polio-BCG for all children under 1 year of age; 2. An 80% immunization rate for measles for all children under 2 years of age; 3. A 50% immunization rate for all pregnant women with tetanus toxoid; 4. A 5% immunization rate for the entire population with tetanus toxoid; and 5. An 80% immunization rate for all school children in the first grade with diptheria and tetanus.

Dr. Hernandez noted that in the Eastern Region, for example, vehicles had been stolen by the guerrillas and certain health personnel had been kidnapped or even killed. Therefore, they were not able to carry out a full-scale immunization campaign now as had been done in the early 1970s.

He went on to discuss oral rehydration, stating that the program began in 1979 in the western provinces, expanded in 1981 to include the central and metropolitan areas, and then added the paracentral zone in 1983. The goal is to treat 40% of all infants (1 to 4 years of age) with oral rehydration when they have diarrhea.

He briefly discussed the treatment of intestinal parasites, noting that Mebendazole had once been given two times per year to all first, second and third graders.

Unfortunately, he said there was poor cooperation from the teachers and this program has deteriorated. It was unclear what his conclusions were regarding the future of the program.

He further stated that rabies was only relatively under control this year, with 23 human cases to the present time (August 15) compared to 23 cases for all the last year and 12 cases for 1982. The Ministry has a program to eliminate all street dogs and vaccinate all dogs having an identified owner. An active campaign is underway at the present time.

With reference to the venereal diseases and tuberculosis, he said the problem was the lack of medicines for control of each. Presumably this could be corrected with more resource allocation.

I then returned to talk with Dr. Pereira regarding site visits throughout the country. He introduced me to Dr. Roberto Arnoldo Rivera, who, together with Dr. Pereira, went over a map of El Salvador with me. they noted where services units have been abandoned and where they continue. Generally speaking, abandoned units are in the north, particularly in the Departments of Morazan, San Miguel, Cabanas, and Chalatenango. Certain facilities have also been abandoned in Cuscatlan (Suchitoto, for example, has been bombed out), San Vicente, Usulutan, San Miguel and La Union.

The only departments relatively free from disruption are San Salvador, LaPaz, La Libertad, Sonsonate, Ahuachapan, and Santa Ana. Even certain areas in these provinces are affected by the guerrillas as well.

All of this was discussed in conjunction with my desire to select at random certain service delivery sites around the country for the purpose of spot visits.

It was agreed that, given security problems, it would be best to select certain regional centers, then to pick sites out of those centers which were reasonably accessible. Assuming the clinics were open at the time and on the days selected, visits would be arranged — without prior notice to the clinics — by the Ministry of Health. Dr. Arnoldo Rivera agreed to have a list of facilities available for me on Thursday and to discuss a plan of visitation at that time.

We then talked about making a Friday trip to facilities in the San Salvador area. He stated that this would be possible and that he would accompany me in a Ministry of Health vehicle. Details of this trip will be worked out when I meet with him on Thursday afternoon.

My next visit was with Dr. Gonzalo Beltran Castro, Vice-Minister of Health. Dr. Beltran began by telling me that he had spent 12 years with the Ministry and feels that his career as a health administrator is coming to an end. He stated that he has held a number of jobs in El Salvador, including serving as Director of 3 hospitals, Director General of Health for the Minitry of Health, and the Miedical Director for the Social Security System. (He noted that he was paid more as the Medical Director of the Social Security System, reporting to the Director General for that System, than he now makes as Vice-Minister of Health, responsible for the Director General of Health in the Ministry of Health.)

Dr. Beltran noted that what is needed in El Salvador at this time is an entirely new legislative authority for health. He reviewed the various codes currently available and noted that everything is inadequate and needs replacing. The legal structure currently available is not responsive to a changing system and does not give the Ministry the powers it needs.

What he said was truly needed in El Salvador was a "Sistema Unico de Salud," a term which I have found consciously avoided by others. (At least 2 other individuals, Dr. Moran and Lic. Castro, had taken pains to revise the words "Only System of Health" to a "National Health System" when the issue arose in discussion of their respective plans.) It became clear to me that Dr. Beltran was using the term "only system" unashamedly and with emphasis. (This leads me to suspect he is the prime mover behind this politically volatile subject.)

Dr. Beltran reviewed for me the inequities in health care previously noted by others, including the relatively low distribution of resources for Ministry of Health recipients, as compared to Social Security and other recipients in the country. This, he said, could be changed by having a unitary health system which would combine Social Security and the other smaller systems with the Ministry of Health into the single program for the country. He noted that 60% of the population still lives in rural areas and that diarrheal diseases are still a major factor in mortality data. The extra resources which could be gained from the combined system would help to deal with this and other basic problems.

He stated that from his perspective what was needed for El Salvador at this time is disease prevention. This should be the emphasis, with every effort made to deal with malnutrition and provide an active program of health education. He further stated that what was needed in the field of sanitation included pure drinking water. This should be coupled with a strong program in Maternal and Child Health and Family Planning.

What was not needed, he noted, was another CAT scanner, although he said a private hospital either had one or was getting one. The problem is how to treat diarrhea. When we discussed the VISISA Project, he stated that basically he was positive about the program, but felt there has been some mismanagement in connection with equipment. Some of the equipment purchased, for example, is already obsolete. Another problem is that of maintenance.

Finally, he mentioned the matter of the loan vs. grant issue, stating that grants were preferable to loans. (The greatest proportion of the VISISA Project is made up of a loan, with only a small portion being in the form of a grant.)

My next interview was with Dr. Hugo Navarro, Director of Normative Technical Services for the Ministry. He stated that his function was to coordinate the 6 programs of the Division, the component parts of which he then proceeded to review. (This is previously recorded in these notes, so I will not repeat here.) He went on to add, for example, that the Epidemiology Program has 7 sub-programs (also noted previously). When I asked about environmental Health, he referred me to Ing. Vitelio Melara, who is responsible for urban sanitation. He stated that potable drinking water and latrines were the responsibility of Ing. Juan Olmedo in the PLANSABAR Program, which is housed in another location.

In this regard, Dr. Eduardo Navarro stated his belief that what the Ministry of Health can do best is to insure control of the environment. Here are to be found the greatest successes in public health. He cited the matter of rabies control as an example. He also noted the importance of birth control as a preventive health program.

It being lunch time, I excused myself and went to lunch at the Actoteatro Restaurant. There I met Miss Annie Ischer of the International Committee for the Red Cross (CICR). She took me to their office and introduced me to Mr. Philippe de Sinner, Acting Director in the absence of Mr. Martin Fuhrer. Mr. Sinner provided documentary information concerning the work of the International Committee of the Red Cross in El Salvador, including data on the number of visits made and patients served.

He noted that the International Red Cross handles all visits to the contested zones and such visits are made exclusively by Swiss citizens. Visits to the non-contested zones were made in collaboration with the Salvadoran Red Cross. All such visits are included in the statistics of the ICRC in El Salvador.

We then proceeded to review a map of El Salvador and Mr. Sinner basically concurred with what I had been told by the Ministry of Health regarding operating clinics vs. clinics that were now closed due to the conflict. It is in the areas previously identified by the MOH that the Swiss medical teams operate. These teams consist of one physician and four nurses stationed in San Salvador plus an equivalent team stationed in San Miguel. (When asked if it would be possible for me to accompany a Swiss team into the contested area, he stated that it is impossible because of the rule that only Swiss citizens be included in these teams.)

We next had a general discussion of ICRC work throughout the world. Mr. Sinner recounted some experiences he has had in Iran and compared them to El Salvador. He was extremely cooperative and helpful, given the constraints under which the ICRC operates, as a neutral organization working in areas of conflict.

I then returned to the Ministry where I met with Dr. Jorge Roberto Cruz Gonzalez and Dr. Daniel Mendez. The former is responsible for the Maternal and Child Health and Family Planning, Section of the Normative Technical Services Division of the Ministry of Health; the latter is responsible for the family planning program in that division.

Both doctors advised me that because of the nature of their Section and its ability to attract outside funding, their progams were somewhat autonomous from the rest of the Ministry of Health. When asked specifically what funds were currently available, Dr. Mendez referred to a United Nations Population Fund grant of $410,000 for 1984.

He went on to point out that their section is responsible for supervision of local and regional health programs in the areas of Maternal and Child Health and Family Planning. A prime goal is training of health workers in all levels, which is carried out in the regions. This includes training both physicians and physicians' helpers. The section establishes norms for different programs and then evaluates the program in operation.

Drs. Cruz and Mendez noted that their section is responsible for some 40% of the population of El Salvador, if the total dimension of their charge is considered. This leads to the need for coordination of their functions and with many other resources.

Dr. Mendez noted that there were 270 active health centers now being operated by the Ministry out of total of 316, with the balance being non-functional due to the conflict in the country. He stated that the overall direction for his program was being provided by a 5 full-time OB-GYN physicians who are stationed in the 5 regions. They have complete program responsibility for their regions.

Dr. Cruz and Mendez noted that there had been a considerable decline in the family planning program starting in 1978-79 with a nadir being reached in

1980-81. This was reflected in a massive decline in indicators concerning use of contraceptive pills, placement of IUDs and surgical procedures. Since decentralizing the program in 1981, there has been a gradual but steady return to the former levels in each area, with particular increases noted in the field of IUD utilization. Dr. Mendez feels this is due to recent use of nurses in inserting IUDs, as opposed to relying solely on physicians, as was done in the past.

We then had a brief discussion of AID programming and what they thought of it. I also asked why no population money was currently coming to the Ministry from AID. The answer in both cases related to their perception of AID as having switched in the last few years from grants to loans. They pointed out that El Salvador has no possibility to repay loans and must depend upon grants for programs such as theirs. Previous AID funding, they noted, came in the form of grants and that is a necessity for support of programs at the present time, given the economic situation in the country.

Because 4 o'clock had arrived and the Ministry was due to close, I excused myself and thanked the doctors for their assistance. They provided me with a data sheet giving a detailed breakdown of three methods of family planning (IUDs, the pill and sterilization), comparing data for 1983 and 1984 by regions of the country and in terms of activities for each method of family planning. (This represents what I am coming to believe is a Salvadoran habit of collecting and reporting data in great detail and with some apprarent accuracy.) The chart in question compresses on one page everything one would want to know about family planning efforts in El Salvador for 1983 and 1984. As noted earlier, it shows a marked increase on the use of IUDs from one year to the next, with little change in use of the pill or of surgical sterilization.

I then dropped by Dr. Moran's office to speak with the individual (Luz del Carmen Irigoyen - Tel. 21-4107), who had been identified earlier on the day by Dr. Moran as the one to help me make appointments. We discussed two appointments for the following afternoon and I returned to the AID office to pick up my transcription for that day.

DAILY ACTIVITY REPORT
ANDREW W. NICHOLS, M.D., M.P.H.

August 16, 1984

My first meeting of the day was with Dr. Raul Paredes, a Guatemalan and Director of the Pan American Health Organization Office in San Salvador. After introducing the purpose of my visit (he had received a cable from Dr. Herbert Ortega stating that I would be coming), I asked if he could give some perspective to the health situation in El Salvador, together with a description of his office and what it does.

Dr. Paredes began by providing an historical review of the health situation in El Salvador. He stated that the country was dealing with an economic crisis coupled with a social crisis. This, he said, was added to a political crisis, the result of which was the guerrilla activity now underway. That trend led to disruption in the means of production, which led to a reduction in the health of the country. In short, he said El Salvador is in a vicious cycle, with each element leading to the next. He was not pessimistic, however, feeling that in some way (he did not know how) the cycle would be broken.

We then talked about the problems which the Ministry of Health is facing as a consequence of the general economic and social disruption. He stated that one of the problems was that much of the country was unknown to the Ministry, making it impossible to report accurate data. He noted that some 47 health centers and health posts had been closed, meaning that no data is coming from these facilities to the central government. When large areas of the country are outside the government's control, this leads to questions regarding the reliability of data. For example, he pointed out that the official statistics for infant mortality in El Salvador are 44 deaths per 1,000 births. However, he added that another branch of government reports 86 deaths per 1,000 births. Which is correct?

Programmatically, he feels the Ministry of Health needs reorganization. Currently it divides normative and technical services from operational services. The former are vertically organized and do not interrelate horizontally with the services they are meant to influence. This should be changed. It is quite possible that a failure to coordinate programs is contributing to an actual decline in health and increase in disease. Of course, the conflict plays a major role in this as well.

Dr. Paredes went on to point out how international assistance could be a service to El Salvador. He noted that a number of international agencies who work in assisting the country hopefully do so in relation to a regional plan currently under development. This plan for health development in Central America (referred to as "Priority Health needs in Central America and Panama") will be discussed, in part, at a meeting next week in Guatemala City. That meeting will be attended by Ministries of Health of each of the Central American countries including Panama, as well as PAHO officials. The particular focus of the session will be on nutrition and health.

The project in question began with a meeting in Panama and is sponsored by the Contadora nations. He stated that UNICEF, for example, had already pledged 66 million dollars to the evolving program. He felt that AID and the

Interamerican Development Bank (BID) were both appropriate agencies to join in this coordinated effort.

He described the basic elements of the project as being: 1) health services; 2) human resources; 3) essential medications; 4) nutrition and feeding; 5) tropical diseases; 6) infectious diseases and 7) environmental sanitation. (This mix of problems and solutions is taken from notes of the meeting.) The purpose of mentioning these activities in some detail is that Dr. Paredes felt that it would be appropriate for AID to participate in funding the project being considered.

He noted that the Ministry of Health is currently attempting to integrate levels that had been divided in the past. As an example, he cited environmental health services and personal health services. He felt these need to be tied together much more closely than they have been to the present time. He further felt that programmatic functions and physical structures should be brought together so that the patient could receive services in a single location, although the services may differ in terms of organization sponsorship. He stated it was important that patients enter the system at the primary care level and work their way up to referrals, rather than entering the referral chain at will in an uncontrolled manner.

He cited one of the more difficult issues facing the Ministry of Health at this time--that of developing a "single health care system." (This obviously is a highly divisive issue in the Ministry, since several of the people to whom I have spoken refer to the "only health program," while others refer to the "National health program.." Each carries with it a very different meaning and implications for the future.) The immediate task for the Ministry in this regard is to integrate the Social Security system with that of the Ministry. This Dr. Paredes feels will be difficult, but needs to be done.

Dr. Paredes then went on to review the process by which the plan currently under consideration by the States of Central America and Panama will be approved. A meeting will be held in Costa Rica in March of 1985, to which AID, UNICEF and other donor groups will be invited. At that time the Ministers of Health will be asked to approve the overall plan. Whatever is approved will be supported by the Contadora Group on behalf of all the states in the region. The hope is that up to 600 million dollars can be channeled into the project for the entire region.

My next appointment was with Ingeniero Vitelino Melara. Ing. Melara told me that he is sometimes considered "crazy," but that he simply feels strongly about issues, which he demonstrated with a very enthusiastic manner throughout the interview.

He began by noting that the programs of the Ministry of Health have had little impact upon he national health scene. He stated that there was a need to understand what was going on and for a more technical response at a national level. He felt that this administration had finally recognized that the programs of the Ministry were not working and needed an extensive revamping. He added further that "never in the history of El Salvador have we had such an honest plan as that of Dr. Moran."

Ing. Melara feels that the plan at issue represents what he has been fighting for over many years, with limited success. He stated that the physicians of the Ministry of Health were opposing Dr. Moran and his plan. An example of this is in malaria control. If El Salvador continues using the wrong technology they will never succeed--despite beautiful plans. Physicians do not understand that malaria control is at heart an environmental problem; they tend to think of it in more personal terms. The result is no progress. According to Ing. Melara: "We prefer to dance in one place instead of moving forward.."

When asked about his specific activities, he said they were 78 in number. These range from rat control to inspection of food handling and other facilities. I made some comment concerning the thoroughness of data available to support these programs and he responded that: "data collection is a sickness worse than cancer in El Salvador." This passion for data is "equivalent to a mausoleum or cemetery," he said. The problem is none of the data is used — it is simply recorded. Moreover, it is not accurate for reasons already mentioned.

Ing. Melara pointed out that there are 261 municipalities in the country. Of these, only 143 have ever been covered by the Ministry of Health. The result is that much of the country is not covered by Ministry of Health programs. That, in his opinion, is one cause of the resistance movements.

Ing. Melara suggested that instead of 78 programs, what he needed was 5 programs for emphasis. These are as follows:

1. Control of food quality. He states that an organization like FDA is needed in Salvador. Further, laboratories to test and authorize local and imported foods must be developed. He feels this is quite important.

2. Control of solid wastes. This is, in Ing. Melara's view, one of the most important things that government can do. He stated that there was a need for specialization and waste control and that this should be identified and rewarded. (When asked what El Salvador does with its waste at present, he indicated that they simply disperse them into the environment.)

3. Quality of drinking water. This is a third issue which needs to be dealt with, in his opinion. ANDA and PLANSABAR have concerned themselves with getting water to people, but not the quality of water which is brought. This is something which the MOH needs to be sure that it supervises.

   He noted that PLANSABAR had been split off by an engineer that did not feel or understand public health. At this point, however, Ing. Melara does not feel that the separation has been damaging and he does not propose to change it. While ANDA and PLANSABAR build delivery and disposal systems (for water and sewage), Ing. Melara feels that his division provides the vigilance to assure these systems are safe.

4. Vector control. This includes control of rabies, which is now experiencing an outbreak in El Salvador. (As mentioned previously, there have been as many new cases by this date in 1984 as there were in all of 1983.) Further illustrations of this priority are control of insects such as flies and roaches; control of rats; control of kissing bugs; etc.

5. Clean air. This is the fifth priority area for Ing. Melara. He states that there are two concerns here, the air that is breathed in factories and clean air generally. He suggested that much remained to be done in El Salvador in this area.

Ing. Melara stressed the need to train Salvadorans in technical matters so that they will return to Salvador and demonstrate them. Ing. Melara referred repeatedly to technical experts who had come down from the States many years before and impressed him. That is needed today, as well as local training for the same purposes.

I then stopped by the Minister of Health's office to ask to take a picture. The Minister agreed to see me for the picture and, as I was leaving, stated that he had a question to ask. His question related to whether AID was unhappy with the Ministry of Health for some reason, adding that he was new to the job but did not fully understand all the issues involved in these relationships. I responded that I felt there was no unhappiness by AID with the Ministry of Health, but rather that AID had some problems of its own in Washington and the present visits related to how AID might solve those problems. I added that one of the purposes of my visit was to help make suggestions so that AID programming may be consistent with the goals and directions of the Ministry of Health.

Dr. Valdez appeared pleased with this explanation and, when asked if he would be present next week for a final session said he would. (As noted in the previous interview with Dr. Paredes, it appears that all regional health ministers will be in Guatemala city Thursday and Friday of next week. Accordingly, if any of our team is to meet with Dr. Valdez before this, it would have to be no later than Wednesday.)

The next meeting of the day was with Dr. Carlos Alberto Sagastume, Director of Statistics for the Ministry of Health. After explaining my mission to him, I asked Dr. Sagastume how we could have confidence in MOH data at this time. I referred specifically to the conflict and the lack of control in many zones by the government. Dr. Sagastume replied that the MOH never has had capacity to care for the entire 85% of the population for which it is technically responsible. He stated that now a certain percentage of this always uncovered population exist in the contested areas. Further, he noted that because of the displacement phenomenon many of the individuals who have left the zone of conflict are now in government territory. While he noted it is difficult to keep track of who is and who is not "displaced," at least many of these people are being cared for by the government — although not in their villages.

Dr. Sagastume stated that a computer would be helpful for data input and he is looking forward to receiving the VISISA - provided computer. He then reviewed some of the manual data collection and analysis techniques underway. He pointed out that, even without a computer, data is generally available approximately two months after the incidents are reported. He does not feel the computer would enhance this process too much, but that it will improve the flow of information generally.

When I complimented him on the quantity and apparent quality of the data collected with reference to health in El Salvador, he stated that he is like so many others "a prophet not without honor, save in his own country." He

stated that the purpose of data is to assist program planners — not for data's sake alone. To the degree that computers can provide some immediate feedback to local health center providers, they will be more accepted and acceptable to the system.

Dr. Sagastume reminded me that a 5-year plan had been produced for the Ministry of Health in 1953. A single physician wrote it. In 1963, he stated, the first real Ministry-developed health plan emerged. This plan was one and one half months in preparation by a broadly based committee within the Ministry. Much of the current (Moran) plan may be found in the 1963 plan.

When asked about the relationship of hospitals to health units, he stated that prior to 1963 there was a director of hospitals and a director of sanitation. The latter was responsible for health centers. In 1964, the two positions were combined under the Director General of Health. Then hospitals became essentially autonomous once again. Around the mid-1970s, they went back to be under the Sub-secretary of Health for Operational Services.

Dr. Sagastume then showed me some elaborations of the data which he has, including certain displays that show percentages of goals met by month for various activities in the Ministry. Other data sources break down diseases into their presumed causes, then enable the reader to determine how effective programs are in eliminating the root causes of disease. He cited these as examples of how data can be used as a tool for program planners.

He reiterated what I had been told by others — that government positions had been frozen throughout the country since 1982 and that they were not being refilled.

I then went to talk with Dr. Rolando Marroquin, Director of the Department of Training and Human Resources. In some introductory exchanges, he noted that he was the Dean of the College of Medicine at the time of the army invasion and was the last person out of the Medical School. He stated that his tenure as dean was short, lasting something less than 1 year. Currently, he is teaching at the Evangelical University Medical School, which he states is the only Medical School to be teaching community medicine per se. (The Dean there is Dr. Victor Rivera Guillen - Telephone 23-2166.)

Dr. Marroquin then went on to explain his division. Basically, it is made up of two parts. The first is <u>nursing</u>, which consists of three subparts, diagramatically represented as one under the other. They are, in order:

1. Formation of nursing resources;

2. Nursing schools (of which there are 3, all in the Ministry of Health);

3. Courses for nursing auxiliaries (5 are offered, one each in the 3 schools of nursing plus 1 in San Vicente and 1 in Sonsonate.)

The second part of his Department of Training Human Resources is the <u>sanitary training school</u> headed by Dr. Abel Ochoa. This program has within it four parts. These are:

1. Primary Health Care, which is headed by Jose Antonio Rodriquez and includes the empirical midwife program.

2. A training program in health administration, offered to workers in the field as a continuing education activity.

3. Integrated health, which trains sanitary inspectors, nutritionists and others. It is headed by Sonia Arita.

4. Rural training centers for health (Centros rurales de adiestramiento de salud - CARS). He stated that some 258 rural health aides had been trained in this program at 4 different sites. These are: 1. Oriente zone (Jucuapa); 2. Paracentral zone (Hospital de Zacatecoluca); 3. Central zone (Sitio del Nino) 4. Occidental zone (Chalchuapa).

He added that the first two of these had been taken over for refugee and military purposes, the third had been damaged by a flood and the fourth was basically unused. In short, the "Ayudantes Rurales de Salud" program has not actively trained anyone for the past two years (1983-84), trained approximately 80 students during the preceding two years (1981-82 and trained no one in the two years prior to that (1979-1980).

Dr. Marroquin then turned the discussion to the various groups trained through his division of the Ministry. These include "promotores de centros rurales de nutricion", who receive their training through the integrated health program; "Ayudantes Rurales de Salud," who receive the supervision and training under the primary care program; the "auxiliares de estadistica," who receive training in the health administration section. In addition, there are nurse auxiliaries and graduate nurses who receive their training in their respective institutions.

With reference to graduate nurses, he pointed out that in 1981, 170 were trained in accordance with the plan at the time. He stated that only 80 positions were available for graduates to do their social service year, leading to a "crunch", which is now impacting the country. The degree of oversupply currently being felt is demonstrated by the fact that in 1985 only 30 to 40 entering students are projected for the college of nursing.

Since the time was 4 o'clock, the interview was concluded.

DAILY ACTIVITY REPORT
ANDREW NICHOLS, M.D., M.P.H.

August 17, 1984

This morning I returned to the Ministry of Health, as arranged, to make site visits in the Metropolitan Region. I met with Dr. Roberto Arnoldo Rivera, and reviewed with him the 1982 document entitled "Establecimientos y Servicios de Salud" ("Health Facilities and Services"). This documentation of units operated by the Ministry of Health appeared to be the only such document available and there was some hesitancy about taking it from the Ministry, as it had been borrowed from the archives and was said to be " only copy." Nonetheless, Dr. Rivera agreed to allow me to take it to the Embassy over the weekend for the purpose of copying the facility list so as to institute a "randomized" procedure for site visitation.

We then began a review of sites in the metropolitan area. From among the urban sites, I picked one at random (Las Palmas) and asked to be taken to a rural nutrition program, there being only one roadway accessible for purposes of a visit (El Angel). We agreed that a third site would be selected between these two, depending upon time and accessibility.

Dr. Rivera then introduced me to Dr. Roberto Bell, whom he said would be my companion for the day. Dr. Bell is in charge of epidemiology for the Metropolitan Region of the country and, as such, is quite familiar with all the sites. He then proceeded to give me a summary description of each site from the list, noting that some were better than others, some bigger than others and some more accessible than others. Given the constraints of time and travel, we agreed to add Apopa to the list of sites to be visited. In this way I would be able to visit a mobile community health post (Las Palmas), a rural nutrition center (El Angel) and a larger health unit (Apopa). (In fact, we subsequently added one more health unit -- Nejapa -- because of its proximity to El Angel, making possible a visit to four facilities during the day. All of these were without prior notification of the individuals working in them).

The visit to Las Palmas was particularly interesting in that this "tugurio" (slum) was immediately adjacent to a very expensive residential area of San Salvador. After a brief, but very rough, ride we arrived at the community health post. (These posts are referred to as "mobile" because the team which attends them -- in this case on a three times per week basis -- is mobile. The clinic itself is fixed.) We were welcomed by the clinic physician, Dr. Alejandro Osegueda, and a staff consisting of a sanitarian, a nurse auxiliary and a file clerk. The sanitarian, who is normally at work in the field, reminded me that sanitary conditions in the area were atrocious and that correcting them was a primary need. When I later came out of the clinic I found 3 men working some 50 yards from the clinic entrance to clear refuse that had been collected in the street. I was told that these individuals were paid by a grant from AID under the Health and Jobs for Displaced Families project.

In discussions with the Doctor, I was impressed with his dedication and apparent confidence. As with all the physicians I was to meet this day, he appeared to be actively concerned about the welfare of his patients and seemed to be approaching his job with sincerity and intelligence.

We discussed a number of issues, the answers to which coincided with answers provided by other physicians later in the day. The essence of all their responses was the same. The problems being faced by patients utilizing these clinics are elemental (intestinal parasites, diarrhea, respiratory infections, etc.) and are responsive to simple prevention and treatment. Problems which they face are lack of adequate resources to do what needs to be done. There seems to be little question about what this is -- the prevention and treatment of transmissable diseases.

We took a tour of the facility, which also serves as the recreation building and meeting hall for the tugurio. Present in the facilities is a small Catholic program which provides health care one day per week when the medical team from the MOH is not there.

Rooms available to the Ministry of Health's team include a family planning room, an oral rehydration room, an immunization room, a treatment room and a small dispensary. Records are kept by the clerk in a central waiting area. Drugs in the dispensary were quite limited, but vaccines were present and in a functioning cold refrigerator. In this facility, as in every facility I was to visit, they were compulsively keeping records on everything, including variations in the temperature of the refrigerator.

I took several pictures, including one of the health team at the door of he clinic. We then proceeded to the larger and more permanent health unit of Apopa. During the ride, I had the opportunity to ask Dr. Bell what he thought the greatest necessities of the Salvadoran health care system were.

Dr. Bell is 31 years of age and a graduate of the National Medical University. He has already directed two health centers for the Ministry of Health, one during his social service year and one subsequently. While serving as epidemiologist for the Metropolitan Region, he also has a private practice of medicine (office phone: 25-7809; home phone: 25-6671). He is divorced and has one child, a son, who lives with him and who is 7 years of age.

Dr. Bell responded to my question by saying there were four major areas, in his opinion, that needed attention. These are as follows:

1. Immunization of children. He stated that until immunization levels reach 80%, this had to be the priority concern of the Ministry. Coupled with a pervasive immunization program should be programs for nutirition and measurement of growth and development in children. These concerns for children, in turn, lead to total family concerns by the health care provider. All of these may begin, by assuring an adequate immunization status in children.

2. Care for pregnant women. Dr. Bell feels that an adequate pre-natal care system is essential and does not currently exist. Many women first appear for care when they are near delivery. This could be changed by an early detection program with active intervention during the pre-natal period.

3. Environmental health. Dr. Bell stated that nothing is here more important than potable drinking water and latrines. These are the fundamentals of good health. He noted that such advances could not be made by the

Ministry of Health alone, but should be carried out in conjunction with other ministries. Concern for environmental sanitation quickly leads to consideration of adequate housing, which should be made available to the Salvadoran people.

4. Medical care. Only after the other three priorities have been met would Dr. Bell turn to medical care. He does feel that this is very important. However, the emphasis of the present system should be changed. Rather than the current 62% allocation for hospital care and 38% for family care (in the Metropolitan Region), he would like to see these figures reversed. In the context of primary care, of course, each of the foregoing priorities can be considered and met.

We then arrived at the "Unidad de Salud de Apopa," where the physician in charge was Dr. Emerita de Brizuela. Dr. Brizuela received us enthusiastically and, upon learning of my sponsorship, quickly outlined her needs. She stated that these consisted of, in order of importance:

1. Adequate medicines and vaccines for her patients. She noted that there was a constant shortage, even including food supplements and supplies for the clinic.

2. She requested more equipment for the clinic, noting that what they had was rudimentary at best. She pointed to her stethoscope and otoscope and reminded us that these were her own property. The Ministry of Health does not provide them with the needed equipment to do their jobs. A microscope would be extremely helpful.

3. The facility itself was limited and inadequate, she stated. This she demonstrated to us in a tour, then proudly noted that it was being painted as a result of her solicitation of support from the local community. Indeed, we learned that both paint and labor were being supplied by the community and that this is their contribution to the clinic.

I then spoke briefly with the clinic dentist, who stated she saw approximately 20 patients per day, most for extractions and fillings. She expressed the need for better equipment. The nurse auxiliary joined in expressing her concern about the shortage of supplies and materials with which they had to work.

We visited the injection room and learned that approximately 1000 injections were given there each day. We were advised that the number of patient visits was also something over 100 on a typical day. The clinic was quite active at the time of our visit, with patients lined up to receive drugs from the pharmacy.

We passed by the record room and I pulled a chart at random. It showed a patient who last came to the clinic in 1981 and reported a nervous condition. She was pregnant at the time and was given a small dosage of Valium. Her vital signs were all recorded, as were her symptoms, physical exam, diagnosis and treatment.

I then took several pictures of the clinic, thanked Dr. Brizuela for her time and we departed for the rural feeding center El Angel. The ride to El Angel

was on a road that deteriorated rapidly due to potholes. Although we were getting close to Guazapa, where rebel activity is currently underway, there was no evidence of tension along the road. The last mile of our trip to El Angel was over extremely rough and winding dirt road.

The rural nutrition program at El Angel was staffed by two rural health aides, a man and a woman, and two cooks. In and about it were some 60 children, apparently ranging in age from about 2 to 5. Lunch was being prepared as we arrived. (This consisted of noodles with cottage cheese added and refried beans with tortillas. No vegetables were apparent.)

One of the health aides took me around the very modest building which housed the nutrition center. She demonstrated a small collection of medicines that included an anti-helminthic, alcohol, a vitamin supplement, aspirin and a few other drugs. There was a storage room, which contained several sacks of powdered milk, a single bag of beans and some corn meal. The kitchen was an open wood fire with pots containing the foods previously mentioned.

We talked with the rural health aides and I took some pictures of children having their hands washed in preparation for lunch. The children appeared to be quite happy, were rather poorly dressed and seemed to be reasonably well fed. We were told that the center serves as a child care center, with the children being dropped off at 8AM and being picked up at 2 to 3 PM by their mothers. One of the rural health aides staffing the center, Mr. Elias Rosales, appeared to enjoy his work with the children.

Dr. Bell then asked me if I would like to see one more center which was only a few kilometers off the road from El Angel. I agreed and we went to visit the Unidad de Salud de Nejapa. The medical director there was Dr. Mauricio Cromeyer, like the other physicians carrying out his social service year. Also present was the health inspector for the unit, Oscar Antonio Rivera Medina and a graduate nurse, Sra. de Martinez. While we were at the clinic the regional engineer in charge of environmental sanitation, Ing. Elizabeth Moran Reyes, arrived and was most informative and helpful.

In discussion with Dr. Cromeyer, he pointed out that he also was short of needed drugs, supplies and equipment. He proudly noted that through community assistance he was getting some of what he needed. He then proceeded to display a beautiful new microscope, still in its carton, which had just been purchased with community funds. He next demonstrated an area of new construction of the building which he attributed solely to local input. An additional area of construction (to be used for oral rehydration) was also being built with local labor, but with some materials contributed by the Ministry of Health.

One problem which the clinic faces is a variable electric supply. As a result, their cold storage is not dependable, and Dr. Cromeyer keeps medicines at another home in the community where the electricity is more constant than at the clinic. It became apparent that the matter of a constant cold chain was of deep concern to him and that it was taken care of even though the electricity was not always dependable.

Dr. Cromeyer reminded us that the health unit at Nejapa had been under siege by rebel forces two years ago and that health workers had to barricade in the

building for two hours at one time. He went on to state that there had been little evidence of conflict since then. In this discussion he happened to mention that there was a Christian displaced persons settlement a few kilometers up the road and asked if we would like to visit. Everyone present said they would and so we proceeded to leave for the camp.

The settlement in question is operated by the Lutheran Church through Lutheran World Service. It currently houses 675 individuals, including nearly 500 children. It sits in the middle of an agricultural area with corn and cattle raising on the periphery.

We were told that the center owns approximately 3 "manzanas" (measure of land area) and witnessed a very attractive new school under construction. We also saw evidence of latrines and a septic system that had been build for them. The latrines were clean and in excellent condition. Families live in large open areas and have little or no privacy at the present time. The laundry was hung out on the fences to dry.

While were were there it was lunch time and a meal consisting of rice, eggs, beans was being served to those present. Life in the settlement, although terribly crowded, seemed to be reasonably well organized. A man from New York presented himself as the administrator and provided information about the settlement and its organization. (Although we obviously both spoke English, we chose to speak in Spanish because we were with other people who were Spanish speaking.) A Salvadoran social worker who works at the settlement provided a more definitive explanation of the settlement program.

I spoke to several of the children, who told me they were from San Vicente. One of these was in a wheel chair. He stated that he had no father, as was apparently the case for many others in the settlement. We were told that the church was not pursuing adoptions for the children, but simply making possible affiliations with other family members from the areas where orphan children originated. All in all, it was an impressive venture and a useful addition to our day. Once again, I took pictures of the experience.

Before leaving on our site visits we had passed by the metropolitan area regional office. There I was introduced to the Deputy Director for the region, took a tour of the warehouse for the region and visited the local health center affiliated with the region. This was an unaccompanied visit, and quite brief, yet it revealed a very large number of patients who were there to receive care of all kinds, including vaccinations and oral rehydration. This health unit sits next to the regional office were Dr. Bell works and which serves as the administrative center for the Metropolitan Region.

I returned to the AID office where I picked up my transcription for the day, cashed a check and went to the Embassy to copy the list of clinics in El Salvador. This was so that I could take the list with me on visits the following week and make random requests regarding site selection. I then accompanied two individuals from the political section to their homes in the suburbs of San Salvador and once again was reminded of the economic disparities in the country. I was also reminded that the stress under which the mission operates, as we were accompanied by one guard carrying a machine gun and a follow-up car which had two guards with machine guns in it. This

made me glad I was with AID and not the political section. (It is significant that all embassy vehicles have bulletproof glass and are otherwise fortified against explosive devices.)

DAILY ACTIVITY REPORT
ANDREW W. NICHOLS, M.D., M.P.H.

August 20, 1984

My host for this day was Dr. Mario Montes, coordinator of Rural Health Aides (Coordinator de Ayudantes Rurales de Salud).

Because of my interest in areas of conflict and the Ministry of Health's abilities to work in those areas, I queried Dr. Montes about his experience. This was particularly relevant in that he worked for six years in San Vicente prior to assuming his present position. Because San Vicente has been associated with considerable conflict, Dr. Montes said he knew something about working with the guerrila forces.

Generally, he said, the guerrillas respect health workers and allow them to carry out their appointed tasks. When vehicles are stopped on the highways they will be allowed to pass if they are filled with health teams going to rural clinics. The only exceptions to this which were noted were in times of stress, when any government vehicle may be ambushed and destroyed and when health workers rode in public buses. In the latter instance, they could be treated as ordinary passengers, rather than health personnel. This could mean losing valuables, with the possibility of physical danger.

This experience was particularly relevant because Dr. Montes now is responsible for the program which places rural health workers in the most remote communities in the country. As with the Malaria Control Program, it is essential that there be confidence on both sides and that these workers be allowed to pass to the communities where they work. When they or other health workers are detained by the guerrillas, he stated that the detention was normally short and that the greatest loss suffered is usually one's watch and money.

Dr. Montes said there are guerrillas everywhere, even in the Ministry of Health. He stated that the best position for a health worker to be in is to remain apolitical and, as such, stay outside the conflict. He stated that guerrillas had recently been quoted as saying to health workers whom they have stopped or detained that "we have no battle with the Ministry of Health." Thus from the perspective of the physician who runs one of the programs most connected to areas of guerrilla activity in El Salvador, the problem of safe passage for health workers is mainly overstated.

On the subject of the Ayudantes Rurales de Salud (ARS) Program, Dr. Montes felt that it should be greatly expanded. He stated that some eighty ayudantes had been trained two years ago and that none has been trained since, due to lack of funds. Of those that have been trained, something more than one half are now working for the Ministry in a wide variety of tasks. Many of the others aren't accounted for at this time. The school which is used for training ayudantes in the Western Region, although closed, is opened periodically for continuing education courses. Each of these could reopen for a revitalized program of Ayudantes Rurales de Salud.

The potential dimensions of such a renewed program are enormous. Dr. Montes pointed out that there where two thousand and seventy-one cantons or villages

in El Salvador. He said that the goal of the Ministry of Health was to cover all of these with one ARS each. This would mean nearly a one-hundred fold increase in the number of ayudantes now working (two-hundred forty-two according to Dr. Montes), of which some are assigned to settings other than a local village.

We then had a brief discussion of the relationship of the ARS Program to the Malaria Control Program. Despite the apparent logic of training malaria inspectors or volunteer coordinators doing the work of rural health aides, Dr. Montes stated that the malaria Program zealousy guards its people and that this is not a likely prospect. He stated the Malaria Program has been successful because it drew upon the technical expertise of individuals like a well reputed anthropologist who spent time in El Salvador from the United States and because it maintains a separate and clearly defined identity.

I used this opportunity to ask Dr. Montes, who had been in the Malaria Control Program himself at one time, if he accepted the reported reduction in the incidence of malaria of some 20% between 1982 and 1983. He responded that he doubted the validity of this data, citing this organization in the Ministry as a reason. He reminded me that there have been five Ministers of Health in a very short period of time and that the Ministry is always changing its personnel and priorities. He stated that rather than let good people go when new ministers arrive, it would be preferable to keep these employees and take advantage of their training.

He stated that historically the Minister, Vice-Minister, Director General of Health and the Directors (not always) change with the change in government. He stated that in the past few months political changes have been made below the director level in other ministries and he hoped this would not be true for health. The Ministry of Health should maintain a professionalism based upon the discipline of public health. Unfortunately, he noted, many of the people called upon to lead the program have no background in public health.

We arrived in Santa Ana, after travelling on a beautiful divided four-lane toll road for over half the way there, and met with the Regional Director for the Western Region, Dr. Jaime Napoleon Carcamo Rodriguez. Dr. Carcamo welcomed me to the region and made available to me for the day Dr. Jose Federico Hernandez Pimentel, Medical Supervisor for the Western Region and Sr. Manuel de Jesus Aquino Deriote, Health Educator for the region and Coordinator of the "Centro Rurales de Nutricion" (Rural Nutrition Centers) Program.

Dr. Carcamo went on to describe the facilities available on the Western region, noting that there were three hospitals (in Santa Ana, Ahuachapan and Sonsonate), serving some 1,100,000 persons who live in a concentration of 230 persons per square kilometer. In addition to the hospital, there are 2 health centers, 21 health units (seven of these in the Santa Ana Department), 29 health posts, and 6 rural nutrition centers.

When asked what he thought of the Urban Health and Sanitation Program sponsored by A.I.D., he replied that it was basically good although there were some problems. For example, health workers in some of the tuguries were three months in arrears with respect of payment for their services. Sanitary workers in these projects are paid through international donor funds and therefore subject to termination when those funds cease to be available.

When asked what activities he thought were the most important that were being carried out at the present time, he emphasized primary health care, particularly as it relates to diarrhea control, vaccinations and environmental sanitation. He stated that these were the most important activities in which health assistance could engage itself.

I then sat down with my hosts and took out the list of primary care facilities I had obtained for the Western Region. (This had been thoroughly updated for me by the "Servicios Coordinadores" office in the Ministry of Health). Quite arbitrarily I selected one puesto communitario de salud (La Fuerteza), one puesto de salud rural (La Porvernir) and one unidad de salud (El Congo) for visits, if this were possible. They reviewed the map and assured me that it could be accomplished and suggested that I may wish to add a visit to a Centro Rural de Nutricion (Canton Primavera). I accepted the offer and said I would be delighted to have this addition to my self-selected sites.

Our first stop was at the community post La Fuerteza, where we met the medical director, Dr. Silvia de Tovar. (I was subsequently advised that Dr. Tovar had been a candidate for Vice-President of the country in the last Presidential elections on the PPS -- Partido Popular Salvadoreno. They received 7% of the total vote cast in the country.) Dr. Tobar was quite busy, with some thirty or forty patients waiting to see her, which she said is an average day.

When asked what the major presenting conditions of her patients were, she noted that problems included diarrhea, skin conditions, anemias and malnutrition. She stated that health education was a major need for these patients and that she and her nurse auxiliary spent considerable time in talking to patients for health education purposes. She pointed to a book which they kept on their anemia patients, which listed inadequate hematocrits, as well as supplemental iron given to them. In addition to their individual patient records, Dr. Tovar was maintaining a running log of all the cases seen that day. (As it turned out, all health providers seen in El Salvador had such a log on their desks at all times, making notations at the same time as individual patient charts were kept. These logs were required and become the basis for Ministry of Health data collection.)

We then took a tour of the building, which was a community building rather than a clinic. She stated that the clinic which they were using was falling down so they moved to the community center. In the center there was a small room reserved for them, although when clinic was held they moved into the larger meeting area. While there was an examining room set up in the smaller room, she stated that most patients were diagnosed and treated based upon history-rather than physical exam.

We next met with the nurse auxiliary, who was handling vaccinations and patient education. They stated that the sanitary inspector was out in the field, although he travelled with the team. I took some pictures, thanked Dr. Tovar and we proceeded to the Porvenir Health Post.

The trip to Porvenir was somewhat lengthy and over largely unpaved roads. When we arrived at the post there was no physician in attendance. (We learned that he came out Wednesday, rather than Monday, when we were there.) One patient was waiting to see Clara Elena Cubios, the nurse auxiliary who attends the clinic. Miss Cubios stated that she lived several kilometers away and

commuted to the clinic, which she staffs on a daily basis. When asked how many patients she sees, she stated from 6 to 8 daily, although 30 to 35 patients come to see the physician on Wednesday.

When asked if she did physical exams, she stated that she did not and that only physicians did them. She is trained to take histories and make simple decisions regarding treatment. She stated that prior to our arrival she had seen one patient (we arrived there approximately at 10:30 a.m.), a seventy-four year old with a cough. That patient had received antibiotics and an expectorant.

She demonstrated three boxes of file cards on her desk, one dedicated to maternal and child health care, one to vaccination, and one to nutrition (Programa Mundial de Alimentacion). Each of these boxes apparently contained filing cards relating to patients in the respective programs. Patients' records were kept in charts, which are managed by a secretary for the clinic.

When asked how many patients received prescriptions of those that are seen, she responded "all of them." When asked how many prescriptions each received, she said four to five "recetas por cada visita" (prescriptions per visit). This is a problem that appears to be very common in health units in El Salvador.)

When asked about family planning, she stated that she had eight patients on birth control pills, five with IUD's (and two more scheduled) and ten who had undergone tubal-litigation. (She stated that men refused surgery in all cases.) Health education for family planning is given during the pre-natal period when the expectant mothers are seen at the clinic. When asked about the average family size in Porvenir, she responded that nine children is about average. I then asked her if she had any frustrations with the Ministry. She said that she had a shortage of BCG. (They attempt to give one injection sometime during he first five years to every resident of El Salvador.) Other than that she felt that she was well supplied with medications and equipment and had few complaints. Indeed, upon inspection, the clinic seemed to be well outfitted with needed drugs and supplies.

The clinic itself was quite attractive and extremely well maintained. Although it had no cooling system, it was comfortable, clean and well illuminated. The refrigerator worked and the cold chain was maintained.

Our third visit was to the Rural Nutrition Center "Canton Primavera." This required a somewhat circuitous route over rough roads, but we finally arrived at a church grounds in which some thirty-five or so pre-school children were being maintained by a coordinator, two assistants, and a mother-volunteer. As with the previous visit to such a facility at El Angel, it was inspiring to see the children lining up to have their hands washed and about to receive a well balanced and ample meal. Unlike El Angel, which seemed to be drawing permanently from its commodities plus macaroni and cheese for a meal, the coordinator at Canton Primavera had brought in a full supply of herbs and vegetables to complement the staples. Indeed some of the meal looked quite attractive, particularly due to the hour (noon) and our lack of any sustenance to that point.

We then went to the storage area where rice, cooking oil, beans, and corn meal

are kept. The coordinator noted that there was some problems in getting enough food on time, but that they had a supply of everything at present. The storage appeared to be well maintained, with evidence of the capacity to lock up supplies when the center was not in use.

The final visit of the day was to the health unit "El Congo". This unit has been built with Alliance for Progress funds in the 1960s and showed sign of wear. It was the least attractive clinic facility that I had seen thus far. The clinic was attended by Dra. Ideal Romero de Lobos, who was in the terminal phase of her social service year with the Ministry of Health. She was looking forward to entering specialty training in gynecology and expressed no special interest in general medicine.

When questioned, she stated that she sees 25 to 30 patients per day, most of which are pediatric or gynecologic. Of every 39 patients she sees, only 2 will be men.

She noted that her Health Unit has no X-Ray, as is true for all Health Units, or laboratory services. It is staffed by 2 auxiliaries and 2 graduate nurses, as well as herself. The dentist comes three days a week and sees 10 to 12 patients.

When asked what the problems she faced in running te clinic, she replied this included inadequate availability of medications (especially antibiotics), and the absence of any support from a "Patronato" or clinic board. (Other clinics have demonstrated considerable input from these volunteer boards or from equivalent locally designated groups.)

She stated that her Fridays are for more health education and stated that half of her time was so spent. When asked, she noted that there was no oral rehydration program at the health unit and that her patients average 3 prescriptions per patient. They are asked to volunteer 2 colones per visit although most do not pay anything. (When there is a functioning "Patronato," the Treasurer is responsibile for receipt of the donations to the clinic.) We then took a tour of the clinic where we found the auxiliary responsible for vaccinations to be working on her records and noted the sanitary inspector to be sitting in a darkened room. When we entered and turned on the light, he showed us faded maps which presumably represented sanitary conditions in each lot of El Congo. Although we may have struck him in a bad moment, he did not seem to be particularly aggressive or compulsive concerning his responsibilities.

We reviewed several health records with the doctor and then went over her daily patient roster in detail. The distribution of cases basically affirmed what she had said was her patient mix and was consistent with the distribution of ten most frequently encountered diseases as published by the Ministry of Health. I thanked the staff for their cooperation and took a picture of several of them in front of the Alliance for Progress sign. (This clinic looked lilke the other I had visited in that it was over-designed in terms of space for individual examining rooms and under-designed with respect to patient waiting areas and use of natural light.)

We then returned to the regional health center, where I once again spoke with Dr. Carcamo. I asked if he could tell me again what the number one health

need in the country was and he reiterated that this was primary health care. He stressed the importance of expanding and continuing the rural health aides program and expressed some concern about the administration of the rural nutrition program. Part of this concern, he stated, was the relative inability to establish good nutrition centers in the newly established agricultural cooperatives. He added that the Ministry of Health had a much better experience in dealing with communities already known to the Ministry and where these communities expressed interest in the program. Future nutrition programming should be concentrated in such settings.

As part of the emphasis on primary health care, Dr. Carcamo stressed the importance of developing potable water supplies and insuring diarrhea control through means such as oral rehydration. He also stressed the importance of controlling respiratory diseases and referred to a program in Costa Rica which he said had been successful. He emphasized that health education was the key to a successful primary health care program and that this should be stressed.

He then referred to a program at the Ministry of Health hospital in Santa Ana, where an active oral rehydration and aggressive treatment program for diarrhea had been instituted some five years ago. This was accompanied by 50% reduction in infant mortality, which moved from first to fifth place as a cause of death for patients in the hospital. He went on to add that of 25 deaths occurring in the hospital in the month of July, 15 of these could be attributed to malnutrition. He concluded that a rural primary care program was what was needed in El Salvador at this time.

I thanked Dr. Carcamo and his colleagues for the hospitality and we returned to San Salvador. Once again, the day had been instructive and the value of as random selection of sites to be visited as was possible, under the circumstances, was demonstrated.

DAILY ACTIVITY REPORT
ANDREW W. NICHOLS, M.D., M.P.H.

August 21, 1984

Having visited the Metroplitan Region on Friday and the Western Region on Monday, the purpose of this visit was to see a representative sample of facilities in the Central Region. This will leave two regions to be visited - the Para-Central and the Eastern - on Thursday.

My host for this particular visit was Dr. Roberto Arnulfo Rivera, previously mentioned on this report and member of the Servicios Operativos Division of the Ministry. He also informed me as we were driving from San Salvador that he was the individual in the Ministry responsible for the "Centros de Nutricion Rurales" (Rural Health Nutrition Centers) Program of the Ministry. He went on to explain that there are some 30 centers in the country, 6 in the Western Region, 6 in the Central, 4 in the Metropoitan, 10 in the Para-Central and 4 in the Eastern.

In discussing this program, he noted that those rural nutrition centers that had been started in conjunction with the Instituto Salvadoreno de Transformacion Agraria (ISTA), situated in the Ministry of Agriculture, had not been as successful as those located in communities otherwise identified by the Ministry of Health. From its inception in January, 1982, he stated that the program had started 25 centers, only to find this number reduced to 6 as a result of various failures.

The main reason for the failures, he said, was a lack of support from ISTA for those centers situated in the cooperatives. He also stated that there was a problem with logistic support from the Ministry of Health, such as supplies not arriving when they were scheduled. Further, the pay schedule was unrealistic, left coordinators receiving only 50 colones per month and helpers 30 colones per month. In addition, because the program only provided four basic commodities (cornmeal, beans, rice and cooking oil), program employees would often buy supplemental food, such as sugar, vegetables, etc. out of their own pocket. He finally said many communities where the centers were located provided very little public relations for them, leaving people to find out about the program for themselves.

Dr. Rivera entered the Ministry of Health in March, 1983, and began a program of revitalization for the rural nutrition centers in September of that year. This was made possible by a program evaluation of AID and the reprogramming of funds to support a renewed effort. For example, P.L. 480 funds were made available in the amount of 280,000 colones to help subsidize program activities. The result is the newly active centers, which are new "owned" by their communities.

We then arrived in Santa Tecla where we met with Dr. Juan Jose Contreras, Regional Director for the Central Region of the Ministry of Health (the Central Region includes the provinces of Chalatenango and La Libertad). Dr. Contreras offered to accompany us on the day's journey and both Dr. Rivera and I stated that this would be an honor. We then reviewed the map of the Central Region and I proposed a route which would take us to a health unit in Zaragoza and La Libertad as well as the health post in Mizata. (I was interested in

seeing this post because it was a recent addition to the government-operated posts, having been opened in March of 1983.) Time permitting, we also agreed to visit the health unit in Lourdes, which I selected simply because of its familiar name.

Our first stop was in the health unit at Zaragoza. Zaragoza's clinic is designated as a health unit because it has a full-time physician. Physically, it is no more than a health post, having been designed for this purpose. Because the patient load has been growing, the ministry plans to expand the physical facility so that its capacity is that of a true health unit. The physician there is Dra. Silvia Lazo, who hopes to train in Internal Medicine at Hospital Rosales. She stated that everything depended upon the examinations which are to be given in November, with the residencies beginning in January of next year.

When I asked Dr. Lazo about her patient load, she said she averaged 34 patients per day. Most frequently seen diseases are diarrhea, bronchitis, scabies, and intestinal parasites (ascariasis and amoebiasis were mentioned). She stated that there is no laboratory in the Zaragoza clinic (in spite the fact that it is a health unit, as opposed to health post) and that all specimens are sent to La Libertad or San Rafael for diagnosis.

I asked her what was in short supply at the health unit and she responded that they had a constant shortage of antibiotics and equipment. When I asked specifically about stethoscopes, she stated that she provided her own and that there were no stethoscopes or opthalmoscopes at the clinic whatsoever. I then asked how she could examine patients and she stated that when that level of examination was required she referred them to San Rafael for evaluation.

We then discussed, the "Patronato" (or health board) situation in Zaragoza. She stated that the clinic receives donations, but that there is no Patronato.

In addition, the clinic encourages donations of one colon for each visit. As a result, this "contribution fund" now amounts to some 1,000 colones. In order to spend the money in the fund, permission must be received from the regional office for other than very minor expenditures. All funds in this account, together with receipts for any items purchased out of the fund, are forwarded to the regional office on a regular basis.

She stated that when the clinic runs out of medicines, they attempt to buy them. When there are no vitamins, patients tend to go to a private clinic which makes them available. (This is apparently a church clinic operated in the vicinity.)

I was then advised by Dr. Rivera and Dr. Contreras that the purchasing of medicines is not simple in El Salvador. Because of abuses in importation and "sidewalk sales" of medicines, by law it has been required that all medications must be bought through the ministry. This limits the ability of the clinics to purchase what they want when they want it and where they want it. It can be accomplished most readily for more medication provided in El Salvador.

By then I had noticed that a cooking demonstration was going on in the clinic. This was being managed by the nurse in charge of the clinic, Sra.

Anzora de Ariaga. In the demonstration she was showing the advantage of mixing carrots with rice oil and cooking to make a nutritious cereal. An auxiliary nurse was giving a health education demonstration to some of the mothers who were waiting with their children.

Here we also visited the storage room where food was being kept. Although I did not see any being distributed, I was advised that the foods previously mentioned were made available to pregnant women and undernourished children.

This clinic was of some interest in that it had been constructed in 1981 and was in sharp contrast to the dark and cavernous "Alianza para el Progreso" clinic I had seen the previous day (and was to see again in La Libertad). In part because of the staff enthusiasm and the cooking demonstration which we witnessed, this was one of the more impressive visits which I made. It also provided an opportunity to begin a discussion with Dr. Contreras and Dr. Rivera concerning the possibility of charging for medications, if not for clinical services.

The essence of Dr. Contreras' response was that where one clinic had tried to do this, based on the fact that medications were donated to the clinic not provided by the government and could therefore be charged as appropriate, it had been severely criticized by the press. He was concerned about the political implications of a charge although he thought that the idea had distinct merit. We discussed the implications for charging for the medications on the basis that this might reduce unnecessary prescriptions (all clinics seem to average at least 3 prescriptions per visit), thereby reducing the drain on what is the clinic's scarcest resource, and at the same time providing needed income to support clinical operations. Dr. Contreras suggested that I should raise this issue with the Directors in the Ministry of Health and get their response.

Another policy issue which we got into was that of the Patronato and what might be possible in this area. I raised the question of how thoroughly communities identify with their clinics and cited the experience of Nejapa, where a microscope had been presented by the people to the clinic. I was advised there was a complicated set of laws governing the patronato system and that changes would have to be made to give meaningful authority to a clinic board of directors. This was an issue which would be discussed further at La Libertad health unit, which was next on our list of sites to visit.

In La Libertad we met with Dra. Mirna Salazar de Perez. She stated that this was a six physician clinic, two of whom were fulfilling their social service obligations and four were regular Ministry of Health physicians. The physicians at La Libertad rotate their services so as to keep the clinic open and fully staffed all day, but do not provide services at night. Dr. Salazar de Perez has a private clinic which she attends from 3:30 to 5:30 p.m. She then returns to San Salvador, where she lives.

When asked what the primary medical problems of the area were, she responded with the usual statements concerning diarrhea and respiratory infections. Here, however, she added venereal disease. She stated that because La Libertad was a port city, they saw a great deal of syphilis and gonorrhea. (When asked what a house of prostitution is called in Spanish, she responded that they are known as "casas decitas" or "prostibulos.")

When I asked what the main problems she is facing as a physician in La Libertad might be, she responded that chief among them were the lack of medicines and the inability to get them. She stated that when she sends the list of 20 needed medicines to the Regional Office she normally gets two or three of the ones requested. Other problems included the lack of work space and materials.

The health unit in La Libertad, as with others "Alianza para el Progreso" clinics built in this era (1966) has extremely large consulting rooms and inadequate waiting areas. The two buildings I have seen from this period have both been dark and inadequately ventilated. On a site inspection visit of La Libertad clinic, we found the laboratory to be equipped to handle malaria blood smears and stool exams, as well as routine urine tests. The pharmacy was essentially empty, although there appeared to be a moderate amount of food in storage for pregnant women and malnourished children. The doctor reported that the physicians in La Libertad health unit see about 125 patients per day and that the dentist sees up to 40 patients per day (25, if no school exams are included). I visited the dentist and took a picture of him doing a school exam. A student nurse was attending another young boy who had cut his thumb, but this patient did not want his picture taken.

When asked about the Patronato in La Libertad, Dr. Salazar de Perez stated that it did not exist, probably because it had no power. She noted that patronatos were controlled by the law and if they are to succeed require more autonomy. This, however, would require change of the law. Dr. Contreras agreed and said that the sanitary code of El Salvador is also out of date. It was written in the first part of the century, and needs to be rewritten.

The La Libertad clinic currently has about 900 colones in its patients' contribution fund, having used a substantial amount recently to fix the autoclave and to buy medicines for control of venereal diseases. The doctor advised me that for any purchase over 100 colones they need to get the permission of the Central Region. Dr. Contreras added that other donations (as opposed to the clinic "fee") were exempt from this regulation concerning patient contributions and that these donations could be used out in the clinic, as they wish.

When I asked about the difficulties surrounding the purchase of medications "outside the system" and the fact that it apparently had been done in La Libertad, Dr. Contreras said that it was possible, but difficult. This is because all medications purchased in the country need to be manufactured in Ele Salvador, if possible. Other constraints exist as discussed previously.

We left La Libertad to drive along the road which stretches north along the coast. Along this road we passed the birth place of Farabundo Marti, who was the founder of the Salvadoran opposition party. (The FLFM guerrilla front in El Salvador stands for Frente para Liberacion de Farabundo Marti.)

The clinic at Santa Maria Mizata is a recently constructed health post that demonstrates the latest in architectural design for such facilities. In many respects it is similar to Zaragoza, but lacks the outside porch (which had many advantages). The physician in Mizata liked the clinic's design, but stated that more doors and fewer curtains would provide greater privacy for patients.

The doctor is Dr. Douglas Cardona Naves, who is fulfilling his year of social service here. He lives in Sonsonate and commutes to the clinic. There he sees about 30 patients per day. At my request, he reviewed his records for the first 23 weeks of the year and gave the following breakdown by diagnostic category:

Diagnosis	No. of patients
Diarrhea	313
Intestinal Parasites	296
Influenza or grippe	32
Syphillis	9
Amebiasis without hepatic abcess	6
Mumps	6
Gonorrhea	5
Malaria	4

As with all the physicians whom I had met, Dr. Cardona stressed the lack of needed medications, particularly the antibiotics and the anti-diarrheals, as his most pressing problem. He noted that all the medicines bought by the health post directly had to be purchased through the region. Dr. Contreras interjected that this was to protect the population and to stop the black market in drugs. We then went into an extensive discussion of the "Ayudantes Rurales de Salud" (Rural Health Aides) program. I was advised by Dr. Contreras that there were approximately 62 aides in his region. They are supervised by 6 regular supervisors and one program director. Every 15 days the aides are required to present to the nearest clinic (including the Mizata health post) for continuing education. They must report to the regional office on a monthly basis, both to get their checks and to have in-service training. I was told that the Rural Health Aides receive 470 colones per month for their work.

We then had a discussion of the patronato system. There is none in Mazata because there is no judicial authority in the town and one is required in order to form a patronato. Even though there is not a patronato, the clinic does receive donations from the wealthier individuals who live nearby along the beach.

When asked how many of the patients contribute the one colone per visit, I was told that most do. Because many of their medicines are contributed, the Mazata health post asked for an additional colone for medications. Once again, apparently collections are at a high rate.

I spoke to Dr. Cardona about his personal plans and he stated that he planned to go into gynecology. There are approximately 40 applicants for eight places and the successful candidates will be chosen as a result of an examination which will be given in November. He will conclude his year of social service at the end of September and be prepared to start a residency at the beginning of 1985. The hospital where he would get his residency training, if selected, is Hospital Rosales in San Salvador.

We then drove on through Sonsonate and eventually (around 2:30 p.m.) arrived at the health unit of Lourdes. Because of the late hour the doctor had left,

but other staff were present to talk to us. We visited briefly with the nurse, who demonstrated an extremely well stocked food storage area, but the usual limited pharmacy. The clinic was in the process of being cleaned from what appeared to have been a full day's work. The clinic garden had many flowers and it was generally well maintained. As the hour was late and the doctor had gone, we abbreviated our visit and returned to Santa Tecla and San Salvador.

DAILY ACTIVITY REPORT
ANDREW W. NICHOLS, M.D., M.P.H.

August 22, 1984

My first visit of the day was at the Banco Interamericano de Desarrollo (BID), where I met with Licenciado Lucio Paz, the representative of BID in El Salvador and Mr. Luis Rolando Buitron, an economist of BID. I had gone to BID because of the importance of the loan they are making in the health sector to the Government of El Salvador.

According to Representative Paz there are two types of health programs being supported by BID in El Salvadcr. These include preventive and Curative medicine efforts. In the former category are activities to provide potable water through aqueducts and other measures and to install latrines wherever possible. In the second category, BID has been assisting in the construction of hospitals, health centers, and health units, but only on in the context of the total planning effort by the country. Facilities will be built only if enough physicians, nurses, and other health personnel are available to staff them and if they are consistent with the development plan of the Ministry of Health. In addition to such preventive and curative medicine programs, the Bank also provides technical assistance, largely through the Pan American Health Organization.

According to Licenciado Paz, future programs are under development in the areas of rural sanitation and health. Hopefully, the five year plan being developed by the Ministry of Health will act as a guide for the development of these programs. In addition, BID is currently planning a major water project for San Salvador.

I then went to talk to Sr. Buitron, who was good enough to provide me with details concerning BID health and sanitation programs. He stated that there were three major areas and kinds of programs. These are as follows.

1. Since 1960 four loans have been made to ANDA (Administracion Nacional de Acueductos) for the construction of water systems in San Salvador. These amount to $36,940,000. (Project concluded.)

2. Two loans have been made for rural aqueducts. these amount to $6,200,000. (Project concluded.)

3. Two loans have been made for general health improvement. These amount to $42,000,000. (One of these projects continues.)

Mr. Buitron stated that the objectives of the first program were to provide potable water to San Salvador. He added that new programs are currently being planned for the northern portion of the city, with a $12,000,000 loan pending for 1985. This will include development of new wells and bringing water from the Ilopango River to San Salvador. In addition, a $40,000,000 project for the development of a sewer system in San Salvador is being planned for 1987.

Objectives for the second program - Rural Aqueducts - include the development of potable water supplies for rural communities. As noted, this program has had two loans, one in 1972 and the other one in 1977. The 1972 loan was to

provide water supplies to approximately 105,000 people in 85 communities. (For this and other water projects the definition of a rural community is one with a population with between 300 and 2000 people.) The 1977 loan was to serve approximately 100,000 people in 125 communities. This project is just now terminating.

Because certain of the water projects mentioned are in the contested areas, I asked if many projects have been stopped because of this. The answer was negative, although he stated there was some problem with maintenance and the collections of fees in these areas. This is due to the unwillingness of Ministry employees to collect money in areas outside of government control. However, he added that there was little problem in terms of project development in these areas and that 90% of project goals had been met.

Sr. Buitron added that plans were under way for a third loan in the rural aqueduct category. This would be to serve 750,000 persons in 566 communities and would cost $23,000,000. If carried out, this would be one of the largest projects of its type ever instituted in rural El Salvador.

In the third area where BID is involved — health improvements — the emphasis has been on expanding health services and extending the coverage of preventive health programs. The development of hospitals and outpatient facilities in accordance with the national health plan has been stressed.

The first loan in this category was for the construction of facilities, including the completion of a regional hospital in San Miguel (for 620 beds), 11 health centers, 37 health units and 55 health posts.

The second loan, activities of which are still under way, is to construct 8 health centers, 15 health units and 93 health posts. This $27,000,000 loan terminates in May, 1985. (Of the projected facilities to be constructed, 56 health posts have been built and 38 are occupied. Five Health units and 8 health centers have been built and information is not available on whether they are functioning at the present time.)

There have been some delays in this program due to rain and political problems. However, Mr. Buitron stated that the Ministry of Health is working well in its implementation of the program and they expect it to be completed on schedule.

Mr. Buitron went on to amplify what had been said concerning technical assistance by BID. He noted that they were assisting the Ministry in maintaining health services and in the development of an information system. This technical assistance is provided through the Pan American Health Organization, represented at the Ministry by Dr. Raul Paredes. (See August 16 daily activity report.) In essence, BID is paying the salary of technical specialists on Dr. Paredes' staff. In addition, Senior Buitron noted that BID makes money available to P.A.H.O. for the purpose of providing grants to health personnel in El Salvador wishing to study abroad.

When I asked about the failure of the San Miguel hospital to open, Mr. Buitron provided that this was due to a dispute between the Ministry of Health and its contractors. he noted that equipment installation at the hospital was the responsibility of the Ministry of Health and that, from the perspective of

BID, the Ministry had the resources to complete its obligation under its agreement with BID. BID maintains periodic audits of the San Miguel facility to assure that equipment has not been removed and that it is still available for occupancy. He states that the project is 97% complete. The obligation of the Government of El Salvador to this project is 7,900,000 colones.

BID staff then provided me with two annual reports and an economic statistical review of Latin America. I returned to the Ministry of Health where Dr. John Massey and I met with the Minister. The purpose of this meeting was to present my tentative recommendations, which I did. (These same recommendations may be found in the body of this report.) The Minister appeared pleased with the recommendations and we discussed several of them in some detail. He was headed to Guatemala that afternoon for a meeting of Ministers of Health from Central America and Panama. Accordingly, it was a "final report" to him before my departure on Saturday.

After taking care of several personal matters (including taking my driver, Mr. German de Leon to lunch at the Actoteatro Restraurant and picking up a new passport at the American Embassy), I went to visit with the malaria program of the Ministry of Health. The program is not physically located in the Ministry, but is several blocks from it. I was particularly interested in making this visit because of my background in parasitology and my concern for the importance of malaria to the health of El Salvador. I was also interested because the facility had been bombed two days previous to my visit by unknown assailants.

When I arrived I met with Dr. Mario Van Severen, the physician director of the unit, and Ing. Victor Pou Hawley, the PAHO representative to the program. We went to the area where the bombing had taken place and witnessed a building whose roof had been blown off together with some of the damaged equipment. Five vehicles which had been destroyed were already removed. Glass had been broken throughout the first floor of the building and other damage was evident throughout. Neither Dr. Van Severan nor Ing. Pou had any idea who had done this or why. No warnings had been received or reason given.

Dr. Van Severen then began to recount the history of the malaria program in El Salvador. He noted that it began around 1909, but became a definite program in the 1930s and 1940s. In the 1950s an eradication effort was begun using W.H.O.-suggested methods. By 1956 insects had developed resistance to all insecticides then in use including DDT and Dieldrin. Later (early 1970s), resistance to Baygone (OMS 33) developed in cotton growing areas. Dr. Van Severen stated that the coastal zone was the most effected by resistance due to the indiscriminate use of insecticides in this area.

During this early period two drugs, Chloroquine and Primaquire, were used both for prevention and treatment of malaria. Drainage techniques were then implemented and found to be extremely effective. These were financed by the Point Four Project (Servicio Cooperativo Interamericana--the precursor to AID). A program using sterile mosquitos (including the release of over a million mosquitos per day) was not effective. (When I asked who the entomologist was who was participated in the malaria program for a number of years and of whom I had heard so much from others in the Ministry, I was told that his name was Dr. Austin Kerr and that he was in El Salvador for 11 years.)

The current era of malaria control in El Salvador dates from 1977 when Dr. Van Severen took over the program. At that time new criteria for the investigation of malaria were instituted and a stratification of the country by area was undertaken. A more dynamic approach was begun, concentrating on the areas most effected by the disease. Focus was on attacking the breeding places and in making Chloroprimaquina a combined tablet containing both chlorquine and primoquine) available to affected patients. The results, he said, had been excellent.

We then talked about the "Colaboradores Voluntarios" ("Voluntary Collaborators") who are the backbone of the malaria control program. All of these are unpaid and work throughout the country in the most remote areas. (According to Ing. Pou, this is the practice throughout the Americas, with the exception of Venezuela.) Of some 2,700 trained voluntary collaborators in El Salvador 2,500 are currently functioning, but with some difficulties. While reporting may be less frequent than before the conflict began (for example once every 3 months instead of once every month), the voluntary collaborators are, for the most part, continuing to operate throughout the country, including the zones of conflict.

In selecting volunteer coordinators for the malaria collaborators, the Ministry looks for someone who is literate and has leadership qualities. A survey of the areas to be served is to select candidates for the position. Coordinators need to be able to make malaria slides, as well as interpret them, and to manage the malaria control equipment which they are given. They are supervised by inspectors at least once each month and more if necessary. Microscopes have been taken to the countryside so that slides can be read there, rather than have to be sent to Ministry facilities. I was advised that there are currently some 400,000 malaria slides per year made in El Salvador and that 80% of all these slides are read in the countryside. Slides are read by 40 microscopists who have been trained exclusively for this purpose. There are 130 malaria inspectors in the program who supervise the field coordinators.

When we further discussed the issue of current involvement, I was advised that there was some decline in supervision caused by the conflict, but even so it continues. They denied that any vehicles had been taken by the guerrilas or that any of their workers had been harmed in any way. One had lost his shoes and some had had medicines taken, but, according to Dr. Van Severen and Ing. Pou, no one has been robbed of their personal possessions while participating in the program.

Malaria, I was told, is endemic between sea level and 300 meters. 85% of the cases may be found in this zone. The current foci of the program are to control malaria through the methods previously mentioned and to eradicate the aides egypti mosquito for the purpose of controlling dengue and yellow fever.

We then discussed the reasons for the independent malaria program, which in some respects is only loosely affiliated with the Ministry of Health. They stressed the importance of maintaining this independence and added that the association with the Rural Health Aides (ARS) program failed because that program had different objectives. Both gentlemen informed me that AID was slow to respond to their needs and they felt that they were often "hanging by their fingernails" for lack of various kinds of support.

We then discussed the rate of reduction in the incidence of malaria and they produced various charts and graphs to prove that this was not a significant reduction. The fact is that malaria has always been cyclical and will always recur in a subsequent year. Data from 1979 to 1983 is as follows: 1979 - 75,657 cases; 1980 - 95,835 cases; 1981 - 93,187 cases; 1982 - 86,202 cases and 1983 - 65,377 cases. The only certainty is that the number of cases will return to higher levels without a massive effort of control in the endemic zone. They do, however, attribute the reductions between 1980-1983 to a multi-program started in 1980 which includes: chemotherapy of presumptive cases of malaria, source reduction, residual house spraying and larvaciding.

The key, once again, the control is to eliminate the "criaderas" or breeding places for mosquitoes. They stated that their equipment was in bad condition (their newest vehicle was 8 years old with many 20 years old or older) and that they suffer from a chronic shortage of medication. They reminded me that Central America, with 3.5% of population of Latin America, has 33% of the malaria. While the mortality rate from malaria in El Salvador has declined from something approaching 5,000 deaths per 100,000 persons per year in 1945 to an extremely low level today, the morbidity associated with the disease remains serious. (Approximately 2 million dollars has been dedicated over the next 5 years to the control of the aedes egypt mosquito. There is a 6.5 million dollar program on the way for the elimination of malaria breeding places, with another 3 million dollars allocated for support material, equipment and related projects. The total malaria control project budget at the present time is about 9.5 million dollars per year.

My next visit was to the office of the Save the Children Project in El Salvador, where I met with Mr. David Rogers, the local coordinator. He briefly described two basic programs, one in La Union, which is an agricultural demonstration project, and another project which is beginning in the rural areas of Cuscatlan and San Salvador. They are currently registering some 7,000 families in connection with this later project in the hope that volunteers can be identified to carry out the work of the Health Program which is scheduled to follow.

The purpose of this program will be to influence family behaviors that will impact favorably on the health status of children. The project proposes to achieve changes in the following areas:

1. vaccination of children zero to five years of age and women ten to forty-five years of age;
2. weight monitoring of children zero to five years of age;
3. food supplements (milk, oil and sugar) for small babies;
4. adequate diet for pregnant women and children (using local foods);
5. oral rehydration therapy for children with diarrea;
6. adequate access to medical treatment, including community pharmacies and availability of empirical mid-wives;
7. family spacing;
8. use of clean water;
9. adequate waste disposal;
10. environmental sanitation around the houses.

Mr. Rogers described that the Ministry of Health has been in very passive system. He saw the Rural Health Aide program as being a good one, but said

that they lacked resources and supervision. They lead their normal lives in the villages and carry on some minimum health work. They tend to respond to requests when asked to do so, but often show little initiative.

The policy of Save the Children is to pay only for specific tasks performed in conjunction with their projects. An example is the health survey which is currently under way. When they pay they pay the minimum wage (unlike AID, which is currently paying refugees families only 6 colones per day, which Mr. Rogers feels is too little. This is with reference to the AID employment generation program for displaced persons.)

Save the Children finds that it can work with the Rural Health Aids and that they make good workers when called upon to do something specific. Mr. Roger's stated that there is ideally one rural worker in each municipo, but that the results do not live up to the promise. He also stated that clinic services are less accessible than they are said to be. In San Martin, for example, the accessibility to the health post is limited by the one colon "contribution" expected of all patients.

We then discussed the principal of community based integrated rural development (CBIRD), which has been the basis for Save the Children's projects throughout the world. He stated that a revision was currently under way to stress child-based programming aimed at children under 15. This program concept will use indicators which are keyed to health outcomes in children. He asked if I knew Dr. Berggren, formally of the Albert Shcweitzer Hospital in Haiti and Harvard School Public Health. I stated that I did know him and Mr. Rogers noted that Dr. Berggren was not the full time advisor for health with Save the Children.

One additional fact which I learned as a result of this meeting is that there is something called a Blair Pit Latrine. This is an improved version of standard latrine which is reasonably free of flies and odor. It achieves this marvelous end product by using a coiled or snailed type entrance, thereby eliminating the need for doors and other moving parts. The key to the performance of the latrine is a stove pipe vent which comes up through a hole in the slab, in addition to the main hole used with the latrine. The result is that insects rise to the light, where they are trapped by a screen and die from heat exhaustion. Odors also are drawn up this pipe and are further dissipated by the open construction. Save the Children is considering bringing this latrine to El Salvador.

My next and final visit of the day was at the Instituto Salvadoreno del Seguro Social (ISSS). There I met with the Sub-Director, Dr. Mario Antonio Solano and the medical director for ISSS, Dra. Vilma Hercules de Aparicio. My entrance to the Social Security building was intriguing, in that there was a high level of security both at the entrance of the hospital and to the top floor, which is the Administrative Office for the program.

Dr. Solano explained to me how there were two basic entities operated by the state in the health and social welfare arena. One was the Ministry of Public Health, which provides free medical services to some 85% of the 5 million population in El Salvador. The other is Social Security, which is financed by a combination of state, employer, and personal contributions and which encompasses approximately 7 1/2% of the population. (This is half of the

population in the money economy of El Salvador — i.e. those on salaries and others eligible for ISSS.)

He noted that ISSS is for the private worker, for the most part, and its current enrollment is affected by a 40% of unemployment rate in the country. He did note that there were other specialized health systems than ISSS. These include the armed forces, who are responsible for some 40 to 50 thousand persons, in his estimation and who have a system of health care and pensions. The second alternative system is that of the teachers (the "magisterio") that is for primary and secondary school teachers and is estimated to have about 20 thousand enrollees. The final program is one operated by ANTEL, the national communications system. ANTEL serves some 5,000 employees. Of those covered by ISSS, some 200,000 are directly insured and another 100,000 are eligible dependents of the insured—for a total of 300,000 enrollees.

I then asked about a subject I know would be of concern to Social Security representatives—the "sistema unico de salud." There is no such thing, I was told. Rather, there are multiple systems, some of which are better organized than the others. A "single" system does not and should not exist in the current environment.

Social Security currently operates 38 Health Centers. Hospital facilities are as follows:

Metropolitan Region - 4 hospitals

Occidental Region - 2 hospitals (Sonsonate and Santa Ana)

Oriental Region - 1 hospital

Central Region - (?) hospitals (This represents the combined Central and Paracentral Regions as defined by the Ministry of Health.)

In general, Social Security does not maintain smaller health facilities (health posts, etc.) on a permanent basis. It will, however, establish dispensaries during the life of a particular economic project (e.g. construction of a dam). When the project is terminated, the clinic will be terminated with it.

One of the problems currently being faced by Social Security is the poor economy and consequent low employment plus the displacement of government resources toward the military. (It takes from 15 thousand to 20 thousand dollars per year to support one soldier.) The result is that funds are often not available to help pay for the extra benefits provided by Social Security.

Realizing the political dangers which it faces with so small a base in the population and in view of the fact that calls are being made to establish a unitary health system, Social Security is exploring other groups that it may include in its network. According to Lic. Solano these are as follows:

1. Public employees in the Central and Metropolitan Regions constitute the first and most expensive group. (Public employees in the Eastern and Western Regions are already included in Social Security.) The problem of including Central and Metropolitan Region public employees in Social

Security is that they would cost the state approximately 75 million colones a year, if added to the system. This is because some 100,000 persons are employed by the state in these two zones and are being paid approximately 1 billion 750 million colones per year.

2. Small businesses could be brought into the system. This would be based on the number of employees and the kind of production represented by the business. It is estimated that this could add another 30,000 persons to the Social Security roll.

3. Domestic workers might be added if they could be identified and found. A survey in 1974 estimated that there were some 35 thousand maids and other household helpers in the country. This figure may be lower or higher at the present time. Lic. Solano noted that particular care will have to be taken if this group is to be brought into the system because some employers might fire employees rather than pay the costs involved.

4. The last and potentially largest group are those in the agricultural and fishing sector. Their inclusion would have major implications, but it is not clear how many are eligible. What Social Security would be looking for are cooperatives or businesses in these two sectors that have shown a record of productivity and profitability, together with the ability and willingness to pay the cost of Social Security benefits. An example would be a successful agricultural cooperative.

We concluded our discussion by reviewing the options for Social Security and agreed that this was a dramatic time for the system. Its ability to survive might well relate to how quickly and successfully it can build a larger base. Clearly, the occupants of the top floor are not in agreement with the unitary health care system, but believe that the motives which it strives to achieve are desirable.

In being 4:45 I returned to the AID office to pick up tapes and transcriptions and then returned to the hotel.

DAILY ACTIVITY REPORT

ANDREW W. NICHOLS, M.D., M.P.H.

August 23, 1984

This was to be the last day for site visits outside of San Salvador. Because of transportation difficulties in the country, arrangements have been a helicopter to take Dr. John Massey, Phyllis Autotte, Dr. Roberto Rivera and myself to sites in Usulutan, San Miguel, and San Vicente. In this manner we would be able to talk to Regional Directors of MSPAS in the Eastern and Paracentral Regions of the country, as well as visit health centers in each of these zones. By so doing, I would have visited every region of the country, as defined by MSPAS, and have some overall perspectives of health services in El Salvador.

Our first visit was with Dr. Luis Delgdo Aviles, Medical Director of the San Pedro Hospital in Usulutan. Dr. Aviles has been in this particular job for only the last two months, having served on the medical staff of the San Pedro Hospital previously.

The hospital in Usulutan has been described as a typical regional hospital by others who have visited comparable institutions throughout the country. It was built by the Germans and has 266 beds in a four-story structure. However well constructed, the hospital shows signs of extensive use over many years and it is in a stage of poor repair. According to Dr. Aviles, much of the equipment needed to maintain the institution is unavailable due to its German origin.

Dr. Aviles said the hospital has many problems, among them being water and electricity. Water pressure, due to defective pumps, often does not reach to the top floor. This creates a sanitation problem. Electricity, due to intermittent supply, frequently does not allow elevators to be used. This necessitates transport of patients and support services by stair. (Dr. Aviles suggested that all the hospitals in El Salvador be no more than one or two stories in height for this reason.)

Major problems in terms of equipment, replacement, and spare parts are in the laboratory and radiology departments. Much of the equipment available for the laboratory is broken and cannot be replaced or repaired. In radiology a Pickering X-ray machine that is over 50 years old is still in use. These are merely symptomatic of many problems to be found throughout the hospital.

Despite these problems the hospital is heavily utilized. The outpatient department sees more than 250 patients per day, as does the emergency room. Currently bed occupancy is 75% of capacity, although this can be higher in times of crisis. On our visit waiting rooms and virtually every area of the hospital were filled to overflowing, with beds in the hallway in the outpatient department and the emergency room.

The hospital is currently staffed by 28 physicians, 17 of whom are permanent and 11 of whom are fulfilling their social services year as "residents." (Our co-host for the visit was Dr. Juan Antonio Salas, Chief of the resident staff). The hospital has only three specialists, one opthalmologist and two pediatricians.

When we pursued why the staffing is so limited we were advised that it is due, in large part, to the conflict in the region. Many physicians who do come to Usulutan leave as quickly as possible. Hospital staffing is down from former times and the physicians who remain are overworked. Further, the budget for the institution is quite limited (3,000,000 colones per year, 80% of this going to staff salaries).

One deterrent to professionals who might otherwise work in Usulutan is the chronic shortage of supplies and equipment, due to the limited budget. We were told that their most critical problems were a shortage of medicines and intervenous fluids, in addition to the equipment shortage already noted. While they have some X-ray films still available, Dr. Aviles said they were "completely out" of medicines. He demonstrated to us how thousands of patient records are stocked on the floor of the medical records area because there are no file cabinets in which to put them.

We discussed the "Patronato" system as a possible source of supplemental income. We were told that approximately 50% of patients pay one colon per visit to outpatient and emergency departments, leading to a daily collection rate of approximately 250 colones (less than 55 dollars). Apparently the "Patronato" system is unable to make much of an impact in meeting the overall needs of the hospital.

After taking a tour of the hospital, I requested to be taken to a health post in the area. The only one which could be visited, due to time constraints, was the Puesto Comunitario de la Colonia Molina -- the only community post currently functioning in Usulutan. We arrived to find the community post operating out of a converted garage and staffed by an auxiliary nurse, Rosa Carmen Cruz de Sanchez. Sra. Cruz de Sanchez was positive about her mission. She stated that she sees 30 to 40 patients per day every day of the week. No physician has attended the community post for the past 2 years. This is in spite of the fact that a "community post" is defined as an institution that has physician visits scheduled for at least once a week and in many cases for two or three times per week.

There were some 30 patients awaiting Ms. Cruz de Sanchez in an open area with dirt floor outside the clinic. The clinic itself was in marginal condition, offering little more than limited privacy for patients being examined and security for supplies. An unpaid community helper, who had been in the health post for the last three years and remembered the last physician who attended, was present as well.

Ms. Cruz de Sanchez said that the most common problem she deals with is diarrhea. Her normal method of diagnosing patients is through a history, although she will carry out a limited abdominal exam and does have tongue depressors for looking in the mouth. Patients who are able to do so pay one colon for each consult.

Dr. Rivera, who visited the clinic with me, expressed some surprise that it had been unattended by a physician for such a lengthy period of time. He subsequently asked the Eastern Regional Director why this was the case and whether or not it could be rectified. The possibility of taking one of the physicians at the San Pedro Hospital to the community post one or more times a week will be explored.

We then boarded our helicopter and flew to San Miguel, headquarters for the Eastern Region of the Ministry of Health. There we met with Dra. Rosa Emilia de Alvarenga, Acting Health Director for the Region. A major theme of the conversation was the difficulty being experienced by the region due to the long period of conflict.

Dra. Alvarenga noted that 88 health delivery sites are open in the region of the total of 117. She reviewed the regional map with us, observing that northern clinics in the Departments of Morazan and La Union were, for the most part, closed. A number of other facilities are closed as well, particularly the smaller ones throughout the region.

Perhaps more significant than the number of delivery sites closed is the staffing level and frequency of attention for those that are open. The phenomenon which we observed at the community post at Usulutan apparently is typical of small delivery sites throughout the region. That is, those that are open are often attended by an auxiliary nurse with limited physician attendance, if any. Rotating health teams, including a physician, will only go to areas when they are told the areas are secured by the Army. For example, she advised that a team of 2 physicians and 4 nurses was leaving the next day for San Luis de La Reina. Apparently this site had not been visited for several weeks.

Dr. Alvarenga described her problem in getting physicians out to the remote areas as the one of limited transportation capacity and fear for personal safety on the part of those being sent. She stated that they have an acute need for five jeeps scheduled to be delivered as a result of the VISISA project. Seven of their vehicles are currently in the hands of the guerrillas, greatly limiting transportation potential.

She stated that guerrillas frequently rob health posts, but typically did not bother medical personnel. She described how several of the health units have been completely cleaned out--down to the bare walls. This presumably was due to the insurgents' need for medical supplies and equipment. Such site is Guatagiagua, which is now attended twice a week by a health team bringing their own equipment and supply kits. Even the health auxiliary who lived in this site has been withdrawn out of fear for her personal safety.

One problem described in this area by a number of informants is that of kidnapping. While health personnel generally are not harmed (although two physicians were killed last year, when a bus they were driving was stopped), it is not unusual when a health professional is kidnapped, for him to be kept for up to one month and required to provide health professional services to the guerrilla forces. Although this is not a frequent occurrence, the fact that it occurs at all is a deterrent to health personnel working in guerrilla controlled or contested areas.

Dra. Alvarenga described the principal health problems of the area as being bronchitis, diarrhea and scabies. She stated that they did not see wounded civilians from battles between the government and the guerrillas very often, although occasionally people get caught in crossfire between the two forces.

We asked her about the Rural Health Aides (ARS) program. She stated that it had been a great success and she showed me data which indicated that the

Ayudantes had provided 78,653 consults and given 11,741 injections in the region in 1983. Data for January 1984 were 15,072 consults and 2,403 injections. Dra. Alvarenga stated that the Rural Health Aides have contact with professional medical personnel at least one time per month.

I also asked about the rural nutrition centers in the area. She said that four were opened in the region and that the children like them. She felt they were worthwhile, because mothers often don't attend to their children properly in the homes and they are better off in the center. The fact that one mother works in the center each day means that good nutritional practices will flow back into the home. She stated that, in her opinion, the program should be continued.

I then looked at a map of the region and my list of ministry sites. It was apparent that many of the areas we could visit were closed and that others were inaccessible. I pointed out two sites on the map that could be visited by road in a reasonably short time frame and asked to be taken there. She agreed. We also identified another site between San Miguel and San Vicente, where we were due to be taken by helicopter, and asked if the helicopter could land there. As this was a health center and since I had not seen a health center to that point, it would complete my experience with the full range of primary care health facilities in-country. Dra. Alvarenga agreed that this would be a good visit to make and ordered vehicles to take us to the first two sites.

Our first visit outside of San Miguel was to a displaced person settlement supported by AID and the ICRC outside of Moncagua. This settlement has been established to receive Salvadorans returning from the Honduran border area where they went as a result of the conflict in El Salvador. Many of these have been returned by Salvadoran agencies. Some 800 or so of these are now at the displaced persons settlement at Moncagua.

The settlement is characterized by a heavy concentration of people -- mostly women and children, although some men, including young men, are resident there as well -- in a very small area. Two kinds of resident facilities were noted, an older kind consisting of long rectangular buildings with corrugated iron roofs and thatched walls and a more recent version consisting of corrugated iron roofs and walls with corrugated iron dividers separating rooms within the buildings. Common latrines have been constructed and common water sources have been provided. A swimming hole was available in a nearby creek and this appeared to be heavily used by the children.

A brief interview with two families indicated that they had been brought to the displaced persons center by a truck. When asked whether they wanted to come or not, one family indicated that it had been told to come. Another said that it had come from Honduras. The atmosphere of the settlement was one of people continuing with their everyday chores (washing, eating, etc.) but in an ambience of impermanency and purposelessness.

We returned from the center to visit the health unit at Moncagua. The building itself was difficult to approach because of extremely poor streets, but once reached represented a haven of organization and friendliness. We were met by the head nurse, who was described as the assistant director. She was extremely gracious and enthusiastic about her work.

The clinic at Moncagua, like all health units, has several full-time doctors as well as a full complement of support personnel. Three nursing students were at the clinic at the time we visited and, as with all nursing students in El Salvador, were neatly dressed in their starched and immaculate uniforms. The floor of the clinic was being scrubbed with a disinfectant solution, it being about 12:30 p.m. and all patients having been seen for that day. (This is a bothersome fact about the El Salvador health delivery system. Many health delivery sites seemed to function primarily, if not exclusively, in the morning hours, (often opening as early as 7 am), delegating the afternoon to "paperwork" and administrative tasks.)

The facility itself is characteristic of health units built in the mid-to-late 1970's. It is of airy and open construction with appropriately sized rooms and a functional layout. Characteristically, each function of the clinic (family planning, health education, sanitation, vaccination, etc.) has its own room. In addition, there is an area devoted to distribution of surplus foods to those who need them, as well as more characteristic spaces for pharmacy, general storage, dentistry and laboratory. The clinic (being a health unit) at Moncagua has no x-ray capability and refers its patients to San Miguel.

It now being quite late, we returned to San Miguel to meet our helicopter and proceed to the health center at Santiago de Maria. As we were leaving San Miguel we flew over the newly constructed, but yet to be occupied, Regional Hospital. We then continued past the San Miguel volcano, which cooperated with us by having what was said to be its first eruption in twenty-six years.

In Santiago de Maria we landed in the yard of a coffee producer in the area, who had a private heliport. We were met at the front gate of this impressive in-town residence by the wife the director of the local health center, Dr. Jorge Arturo Mena. She invited us into their home, where the group enjoyed the local coffee and we learned the history of the health center.

Health centers in El Salvador are defined as "mini-hospitals," with something on the order of 75 beds. Santiago de Maria, constructed in 1951, has exactly 75 beds. There are also x-ray facilities, a laboratory somewhat larger than that found in health units, a room devoted to printing forms and other health related materials, a reasonably modern operating room (the most recent part of the building), and a pediatric facility which had been donated by a patron of the hospital some years earlier. Of particular interest is the Social Security wing, which contains up to a dozen beds and has its own staff.

The Social Security wing is of particular interest, in that the beds all have sheets (there were no patients at the time we visited the hospital), medications appear to be available and there is a sufficient nursing staff. Space is rented from the main facility by Social Security for their patients in and around Santiago de Maria and it clearly constitutes a separate and superior class of medical care for the area.

Santiago de Maria is located in a coffee growing region and has 18,000 to 20,000 residents. The community is situated considerably higher than the areas from which we had come (Usulutan, San Miguel, etc.) and the air was fresh and cool. The streets were paved, for the most part, and several unusual features were pointed out to us, including a modern basilica and associated seminary. We were told that it was the only community in the area

that had not been attacked to date by rebel forces. (A nearby community--Berlin--has suffered heavy casualties at the hands of guerrilla forces.)

Dr. Mena is an enthusiastic middle aged physician who has served 26 years as Director of the Health Center--a record for the country of El Salvador. He describes himself as a general physician, with a particular interest in emerency medicine and some limited surgical experience. Some years ago he was sent by AID to Mexico for training in a family planning course.

The health center itself has four physicians plus four residents who are completing their social service year. In addition, there are two physicians who staff the outpatient department and one or two physicians primarily engaged in family planning. The outpatient department was described as having 105 visits per day on the average. We were also told that there are approximately three births per day in the hospital, and that this is a reduction from previous years.

Meeting with us to provide information on the health center, together with Dr. Mena were the chief of nursing Sra. Adela Perla de Fuentes and the center administrator. When asked about his training, the administrator responded that he was trained in San Miguel as a bookkeeper and then took special courses in administration.

The center collects approximately 1,500 colones per month from patients who use its facilities. We were told by Dr. Mena that the patronato had been dissolved when its members started getting too concerned in the details of clinic operations. As noted previously, the hospital has benefitted from philanthropy in the past and hopes to do so in the future. Social Security (ISSS) pays 8 colones per day for each bed occupied and, in addition, for the operating room and other services which it utilizes.

The staff agreed that the greatest need for the health center at Santiago de Maria at this time is medicines, which are in chronically short supply. The next need is for equipment and supplies, including beds and linens. (Many of the beds were without sheets and had patients sleeping on dirty mattresses.)

We then had the opportunity to meet a Rural Health Aide who happened to be visiting the center. When asked about the program, everyone agreed that it was excellent and should be expanded. There was common agreement that the greatest need in El Salvador at this time is for more rural health facilities and a strong emphasis on preventive medicine. When this is accomplished there will be enough hospitals, since the demand for curative medicine will be diminished. They also stressed the need for sanitation, including potable water supplies.

Our final stop for the day--and the point where we left our helicopter--was in San Vicente. Like Usulutan and San Miguel, San Vicente has been a point of conflict in the past few years. It serves as headquarters for the Para-Central region, which includes the provinces of La Paz, San Vicente and Cabanas. We met with the regional director, Dr. Pavio Molina and Lic. Oscar Ermando Mendez.

As was characteristic of our discussions in this region, early conversation

turned to disruption caused by rebel forces. They informed us, for example, that clinics in San Esteban Catarina and Santa Clara, both quite close geographically to San Vicente, had been essentially destroyed. According to AID/El Salvador, these two service facilities were rapidly reopened in other locations: one in a nearby school, the other in a private home.

Both of the aforementioned clinics are listed as open in the official Directory of Clinics currently provided by the Ministry of Health. Our informants noted that doctors refuse to go to certain places out of fear for their physical safety. They added, however, that no physician had been harmed yet, but that one dentist had been captured for 25 days and forced to work for the rebels during that time.

We were told that 56 service centers were operating in the region, but that guerrilla action was draining off resources. Vehicles in the region are 23 to 25 years old and badly in need of maintenance and replacement. The operating budget was described as grossly inadequate to meet basic necessities.

The patronatos, they said, function in name only. Collections are minimal, often being less than one colon per patient. The failure of the patronatos to function constitutes a great problem for the region, since official ministry sources are so limited.

Needs include a requirement for more health inspectors and more health promoters in the PLANSABAR program. Forty-three Rural Health Aides are now working in the area and are functioning quite well. This program is seen as beneficial. Some of the rural nutrition centers were said to have closed, in part due to salaries that were too low. Part of the problem was an accord between the Ministry of Health and ISTA, where the latter was to have paid Rural Health Aides salaries, but did not.

Dr. Molina demonstrated great enthusiasm for his task and hoped that a near impossible situation could be improved. He took full advantage of the opportunity to share with Dr. Rivera and the representatives of AID his frustrations and his expectation of greater support in the future.

It being quite late, we decided not to visit any health facilities in the Para-central Region, but merely passed by the regional Hospital. Transportation was provided by a driver from AID, who had come from San Salvador to San Vicente to meet us so that the helicopter could return at an earlier hour. On the return home the AID vehicle developed mechanical problems and we had to be met by another vehicle, which returned us to San Salvador without further incident.

DAILY ACTIVITY REPORT

ANDREW W. NICHOLS, M.D., M.P.H.

August 24, 1984

On my final day in El Salvador I had scheduled myself to have three appointments: 1) a visit to the National Medical School of El Salvador; 2) a visit to the new Evangelical Medical School; and 3) a visit to PLANSABAR, the program for extending potable water systems and latrines to the countryside. This was interspersed with efforts to get my various tapes and transcriptions together so that some kind of report could be assembled when I returned to the United States.

My first visit was with Dr. Jose Ascencion Marinero Caceres, Dean of the School of Medicine of the National University of El Salvador. His initial reaction to me was one of some distance, but willingness to communicate. He stated that his personal background was in internal medicine and epidemiology.

Dr. Marinero began by saying he had no problem with AID and that the University had little to do with AID-sponsored activities. He observed that there has been a wave of AID representatives asking questions about the University and he expressed some curiosity as to why this was the case. Subsequently in the interview, when we had established more of a personal relationship, I asked him once again his opinion of AID and he responded with the observation that AID is associated with the El Salvadoran government, that the government is associated with the military and "the military did that," he said, pointing to a picture of the destruction of the National University's Medical School.

The medical school and the University have many problems, he said. As of September there will be an absolute shortage of money for salaries. All equipment and supplies were eliminated by the military invasion of the campus and everything has be to replaced. While there are a few books, there are no journals available to them at this time. He pointed out to me that the total budget for the University was $47,817,770, only $15,000,000 of which came from the general fund of the El Salvador government. The rest, nearly $33,000,000, had to be raised by the University itself. He stated that this situation did not exist prior to the takeover of the campus on June 26, 1980.

At that time, government troops entered both the old medical school, which housed the technical training program and the school of public health, and the main campus which is on the periphery of San Salvador. The old medical school was completely destroyed and the main campus was pilfered "down to the bare walls." Everything was taken and it was reported that microscopes were sold on the streets by soldiers after the invasion. The legacy of this intervention is very much in the minds of the medical faculty and the rest of the University. They have resolved to rebuild out of their own resources and to continue to pursue independent thinking.

Dr. Marinero said to me that if there were a liberal government in power that the University would undoubtedly question it. The commodity that is valued is freedom of thought. When the campus was invaded it was alleged that it was harboring weapons against the government. Two revolvers were found, and these belonged to security guards at the University.

The concerns of University faculty and students are with great inequities that exist and have existed for many decades in El Salvador and society. At least since 1940 voices have been raised in support of greater equity and Universities in general have become centers of resistance to unjust regimes in Latin America. University closures because of this concern are nothing new. The University of El Salvador was closed in 1972 and twelve months later was reopened in a new structure. The University remains the only place in the country where a free interchange of ideas is permitted.

Because the dialogue in the University was public, many people associated the questioning with support for those opposed to the government. As violence in the country grew, the University was blamed for the violence. This led to the military intervention of June 26, 1980.

The University of El Salvador has some 25,000 students. Each University student pays ten colones per month for ten months per year at the present time in order to partially pay for the facility and the supplies necessary to run the program. Dr. Marinero pointed to a pencil on the table and said that not even a pencil was paid for by the government. They are left with a 30 million colon shortfall and are currently using University reserves to operate the program. The medical school itself is paying 6,000 colones per month rent for the garage in which it is now located.

He stated that the main campus was being restored by the University and that they hoped to be in that facility at the end of September for the new school year. He emphasized this was being done without any help from the government except the public works department, which provided some equipment to clean up the grounds.

Dr. Marinero stated that there were plans to strengthen the primary care and community health teaching at the University, but one problem was that instructors are scared for their lives and are unwilling to teach in remote sites at this time. He stated that these academic plans also included supervision of the social service year, but resources were simply lacking to make this possible at the present time.

When asked who was controlling the growth of medical schools in the country, there now being four in addition to the National Medical School, he answered "nobody." He said this was 'part of the free enterprise' of the country. When I asked what the best thing the United States government could do to assist with the situation, he answered that we should stay out. Leave Salvador to the Salvadorans to work out their own problems.

I asked if there were hope for the existing government, and he responded that there was hope, but he was reluctant to express opinions. What he had stated to this point were facts. I could draw my own opinions. He provided me with some information concerning the curriculum, a copy of the University newspaper, and a list of those faculty members of the College of Medicine who had disappeared, been killed or captured since 1980. (It may be found as Appendix IX.)

I then went to the Evangelical Medical School, where I spoke with Dr. Victor Rivera Guillen. The contrast between the two schools could not have been greater. The Evangelical Medical School was quiet and organized in

appearance; the National Medical School (in the rented garage) had been a beehive of activity with students in every possible location. When I asked Dr. Rivera what the primary purpose of the Evangelical School was, he responded that it was "to preach evangelism to the students." He said that the University had emerged to recapture the concept of God in higher education.

Some twelve percent of the students are Evangelical. Two hours of study is made available each week for each class in every school of the University where Biblically-based subjects are taught. He described attendance as voluntary, but stated that approximately twenty-five percent did so. The plan is that all students should attend these sessions and hear the word of God at some time during their University training.

He went on to add that the University was concerned about the lack of morality among Salvadoran youth. He stated that the education of young people had declined at all levels, including the medical field. He cited examples of graduates of the National University Medical School had been found wanting, including the case of a patient who presented with appendicitis to a student in the social service year who did not know what to do. The patient then went to a private physician who performed an appendectomy. He stated that in the main hospital of the Ministry of Health (Hospital Rosales) in San Salvador many patients are known to die as a result of poor management and this is revealed in autopsy findings. He stated that it was the hope of the Evangelical University that a private University could correct these deficiencies. The medical school training has eight cycles in which public health is offered, including five cycles which include community medicine. (Each cycle lasts for five months.) It takes seven and one-half years to graduate, including the year of mandatory social service. In addition, the medical school at Evangelical University is unique in that it offers humanistic training (literature, anthropology, sociology, etc.) in each of the cycles leading up to graduation. Another difference with the National University is that Evangelical University Medical School offers more training in psychiatry.

Dr. Rivera stated that there was no official health policy in the country. Rather, there is a duplication of function. He stated that the present government offers the first effort at developing a policy and he is hopeful based upon this desire to improve the situation. Presumably such a policy will extend to and include medical education.

Private medical schools include Masferrer (named after Dr. Alberto Masferrer, who lived in the 19th century and was a famous Salvadoran writer and philosopher), Nueva San Salvador, UNASA (in Santa Ana) and the Evangelical Medical School. Masferrer and Evangelical are the largest of the four.

When I asked how so many schools could be justified when the need for physicians was not that great, he stated that a commission had been formed to study the type of physician needed and number. This commission, appointed by a former Minister of Health, is composed of the Ministry of Planning, Ministry of Health, private universities and National University representatives. While the status of the commission remains unclear to me at the present time, he stated that a report is being prepared with the collaboration of the Deans of the private medical schools and that the new Ministry of Health is open to receiving the results of this commission. The problem with M.D. supply, he

stated, lies in distribution. All the physicians are located in San Salvador, Santa Ana, or San Miguel. The rest of the country is yet "to be discovered."

He further added that it would be three years before the first class graduates from the Evangelical School and four for the other private schools. When this first class graduates and for three years thereafter there will be no graduates from the National Medical School because they did not accept new students for three years. (During the period 1980-82, classes continued for students already enrolled.) Thus there will be six years of "grace" in which the physician production problem can be considered. After that there may be an over supply. This is particularly true, in that the National University is this year taking 1,000 new medical students, he said, in an effort to "dry up" the supply for the private schools. He added that while the National University follows a pyramidal policy of entering many students and graduating few, the Evangelical Medical School was trying to enter approximately as many as it would graduate and currently was at a ratio of two admissions for every graduation. He stated that when he was a student at the National Medical School they entered 500 and graduated 28.

He added that in order to graduate from the National Medical School, it was necessary to think like the faculty. This, he said, was to think as a socialist. When I asked about the takeover of the National Medical School campus and the necessity of it, he responded that it was, in his opinion, a bad thing to do but that the subject was "complex."

When asked about the budget of the Evangelical Medical School, he responded that students were charged 200 colones per month for ten months and that with 650 students total, this resulted in an annual income of approximately 1,300,000 colones. Bank loans and other support, which were not clear to me, make up the difference. He stated that no outside gifts were received from churches, the state, or elsewhere. When I asked if the institution were financially run by the "grace of God," he responded with an enthusiastic affirmative.

Clinical training for Evangelical medical students will be in San Rafael and Santa Ana hospitals. This is already underway and begins when the students are in their sixth cycle of training. Twenty-six students will graduate in 1986, these representing a group transferred from the National University when it was destroyed. Approximately 85 to 90 will graduate each year thereafter.

I then left the Evangelical University campus and returned to the Embassy and then the Program Unit office of AID for my next appointment. This appointment was to be with PLANSABAR.

At PLANSABAR I met with Ing. Juan Cornado Olmedo, Director. He provided me with basic printed materials on PLANSABAR as well as a verbal report on operations of the organization. He noted that PLANSABAR was currently looking toward development of the third stage of its aqueduct project for rural aras of the country. He stated that while it had initially been planned to bring potable water to 566 rural communities, that it would instead serve about 300.

Ing. Olmedo went on to discuss the problem of working in conflict areas. He stated that BID regulations make it impossible to apply BID loans for construction in the true conflict zones. He stated that PLANSABAR had received $2 million from AID for construction of projects in areas of San

Vicente, Usulutan, San Miguel, Cabanas, and La Paz. He noted that only the preceeding day he had been in Usulutan and was advised by the military when construction crews could enter certain areas. Basically, he stated, they had had little problem with the construction of wells in Usulatan, although there had been some difficulties in San Vicente.

Ing. Olmedo stated that the problems in El Salvador were different from much of the rest of the world and that, accordingly, so were the water projects. Designs were more complicated for Salvador, using a widespread distribution system from central storage facilities. A more accepted model for the developing world is that of the common well or water source in each community to be served. He noted that whereas the socialization around such a site in other areas might be desirable, the nature of the Salvadoran people is such that they prefer to receive water directly in their homes.

One reason for this preference may relate to security. Out of a questionnaire of over 1,200 communities with 24,000 questions asked, the primary concern in most peoples' minds was shown to be security. Accordingly, gathering at a common well has little advantage when one is concerned about survival.

A major concern of PLANSABAR is maintenance of facilities and equipment, once put in place. Special training is required to have a crew available for this purpose. Some 800 plumbers have been trained at the local level with AID assistance to respond to service calls for the expanding network of water projects in the country.

When asked what AID should be doing in the future, he responded with "more of the same." This includes:

i. Restoration of aqueducts
ii. Study of technology and development of pilot programs
iii. Installation of home filters for drinking water
iv. Studies of water use and how better to design aqueducts
v. Development of sanitary education materials.

He noted that the major economic problems of El Salvador began in 1979, when the conflict accelerated. At that time a decision was made to stress water projects as opposed to latrines. This was due, in part, to the relative importance of potable water systems to the people and their political significance. Approximately $200,000 for latrine construction has been received from AID in the current year. Some funds are programmed for the third stage of the large BID loan.

Ing. Olmedo then provided me with several documents explaining the work of PLANSABAR and made arrangements for me to obtain transportation to return to the Ministry of Health. This I did, meeting with several individuals who had provided me with assistance in the past. This included a brief visit with Dr. Beltran, where we discussed some of my recommendations and at which time I returned the budgetary documents which I had borrowed from his earlier.

A particularly interesting final visit was held with Ing. Eduardo Castro, director of administration for the Ministry of Health, and his assistant, Mr. David Castro. It was here that I learned that a shortage of funds had been found in the PLANSABAR account on two occasions, one in the amount of 366,000

colones and the other 120,000 colones. This matter is currently under investigation. We also discussed the problem of the unopened hospital in San Miguel, a source of embarrassment to both MSPAS and BID. In order to finish the hospital and fully equip it, some 1.5 million colones is estimated to be needed. Of this, approximately 1 million colones is available. Apparently there is a dispute with ARCO Engineering, S.P., the main construction firm responsible for building the hospital. They are charging the government 5 to 6 million colones and the government feels this is inappropriate. This dispute has yet to be resolved.

Another problem which the current administration inherited is the hospital in Ahuachapan. Some 250,000 colones worth of equipment has been identified as "lost" since 1978. This includes condensation pumps, electrical plant equipment, dryers, autoclaves and a food dispenser, to name a few items that are missing. Each of these items was invoiced and paid for by the government, but not found in the hospital when inventory was taken.

When I asked Ing. Castro and his assistant what they thought of the AID Health Systems Vitalization project, he noted that there were some problems. Among them was the fact that old centrifuges ("1950 vintage") which the Salvadoran government did not want were included in the supplies being sent. He noted that many of these did not work and that the government was unhappy with being told to accept such old equipment. Otherwise, he had little criticism of the program.

When asked what the greatest needs were by the Ministry of Health at the present time, he stated the following: First there was a need for renovation of the existing system. Second, they need operating funds just to keep the system going (20 million colones will be needed to operate the San Miguel Hospital each year). Third, and finally, there is a need for a focus on preventive medicine. A larger proportion of funds needs to be invested here particularly in the area of health education.

It being nearly 4:30 p.m., I thanked Ing. Castro and David Castro for their time and returned to the AID Office to continue work on my report. The following day I returned to the United States.

APPENDIX VII

MEDICAL CURRICULUM--1984

UNIVERSITY OF EL SALVADOR

and

EVANGELICAL UNIVERSITY

MEDICAL SCHOOLS

Aprobado en la sesión N° 31-83-85-VI
del Consejo Superior Universitario
Abril/84.-

DOCTORADO EN MEDICINA

PLAN TIPO 210 U.V.

"APROBADO EN 1973-MODIFICADO EN 1984"

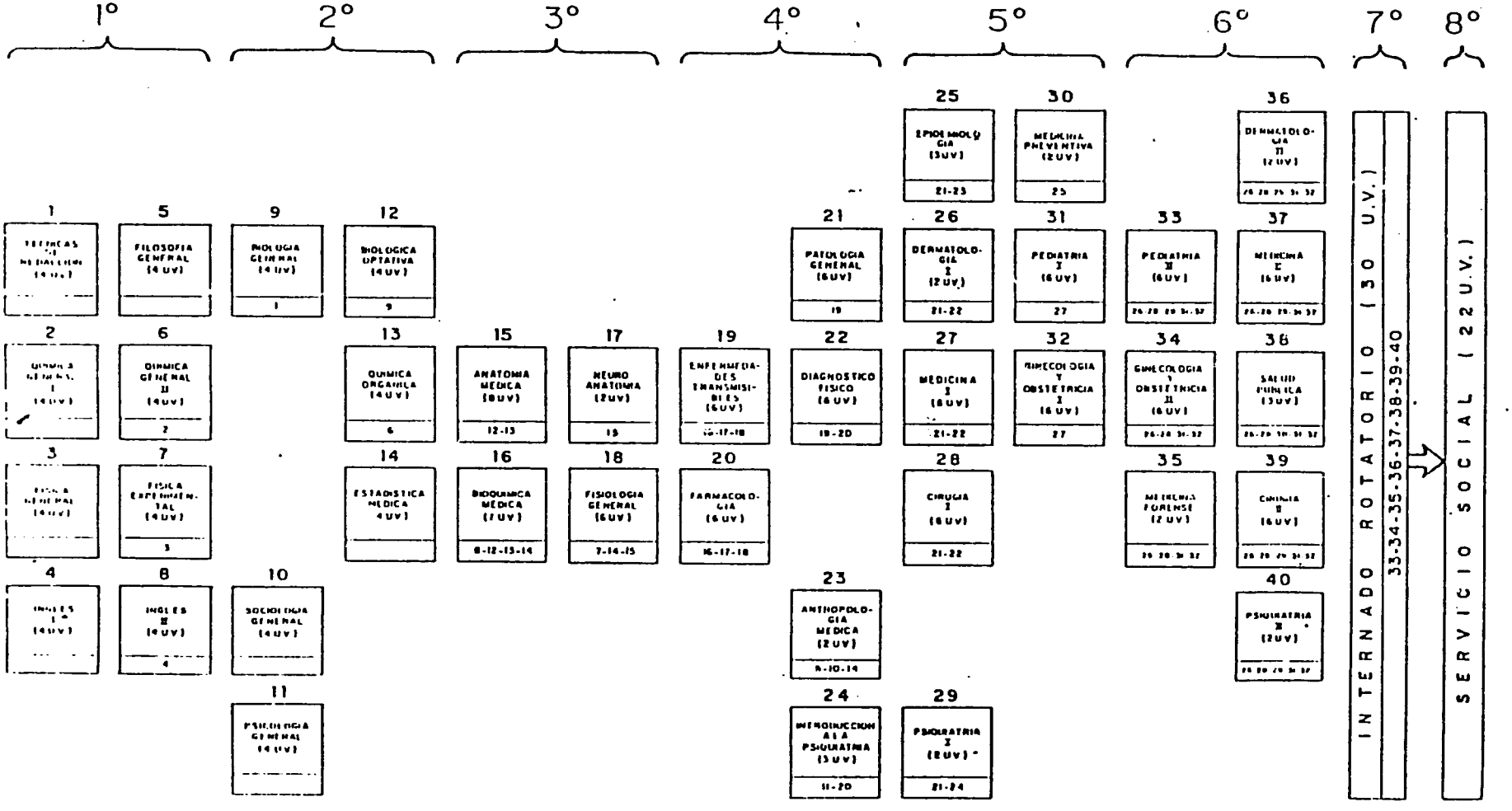


TABLA DE ARANCELES U. E. E. S.

MATRICULA ORDINARIA Y COLEGIATURA

Matricula ordinaria.	
Todas las facultades y carreras	₡ 50.oo por ciclo
Colegiatura por facultades:	(5 cuotas por ciclo)
CIENCIAS AGRONOMICAS	₡ 100.oo mensual de 1o. a 5o. ciclo ₡ 125.oo mensual de 6o. a 8o. ciclo ₡ 150.oo mensual de 9o. a 10o. ciclo
CIENCIAS Y HUMANIDADES	Psicología 1er. nivel ₡ 100.oo mensuales. Otras carreras ₡ 100.oo mensuales.
INGENIERIA Y ARQUITECTURA	₡ 100.oo mensual de 1o. a 5o. ciclo ₡ 125.oo mensual de 6o. a 8o. ciclo ₡ 150.oo mensual de 9o. a 10o. ciclo
MEDICINA	₡ 200.oo mensuales (Medicina) ₡ 125.oo mensuales (Nutrición y Dietética)
ODONTOLOGIA	₡ 200.oo mensuales.

NOTA: El pago anticipado del total de colegiaturas, tiene un descuento del 10 %.

ARANCELES QUE DEBEN PAGARSE EN EL MOMENTO DE LA MATRICULA:

1o. Costo matrícula del ciclo correspondiente.

2o. Primera cuota colegiatura de la Facultad, carrera y nivel correspondiente

3o. Derechos proceso evaluación de ciclo: ₡ 5.oo por materia.

4o. Derecho uso de laboratorios en el ciclo: ₡ 15.oo.

5o. Derechos de prácticas en instituciones (en base a requerimientos explícitos de tales instituciones, cuando así lo exijan).

OTROS ARANCELES:

1. Derecho exámenes diferidos: ₡ 5.oo por materia

2. Derecho exámenes reposición: ₡ 10.oo por materia.

3. Derecho exámenes calificación de suficiencia. ₡ 50.oo por materia.

4. Derecho trámite solicitud equivalencias: ₡ 50.oo, más ₡ 5.oo por materia aprobada como equivalente

COSTO SERVICIOS ADICIONALES

Los servicios que en concepto de documentación, certificaciones académicas, reposiciones de documentos, boletas, manuales y fotocopias, se ofrecen a los estudiantes a valor de costo para la Universidad

PLAN DE ESTUDIOS DE LA CARRERA DE MEDICINA

CICLO PREPARATORIO

Biología
Matemáticas
Química
Biofísica
Inglés

No. ORDEN	MATERIAS	PRE-REQUISITOS
	PRIMER CICLO	
01	Anatomía Humana I	No tiene
02	Microanatomía Humana	No tiene
03	Microbiología Médica	No tiene
04	Estadística Médica	No tiene
05	Psicología General	No tiene
	SEGUNDO CICLO	
06	Anatomía Humana II	01, 02
07	Fisiología Humana	01, 02
08	Bioquímica Médica	No tiene
09	Parasitología Médica	03
10	Idioma y Literatura Nacional I y II	05
	TERCER CICLO	
11	Farmacología Médica	06, 07
12	Principios de Epidemiología	04
13	Inmunología Humana	07, 08
14	Psicología Médica	[illegible]
15	Genética I	[illegible]
16	Introducción a la Medicina I	[illegible]
17	Idioma y Literatura Nacional III y II	[illegible]
	CUARTO CICLO	
18	Patología General	11, 13, [illegible]
19	Fisiopatología I	07, 08
20	Psicopatología	[illegible]
21	Salud Pública	[illegible]
22	Introducción a la Medicina II	[illegible]
23	Componentes Culturales I	[illegible]

No. ORDEN	MATERIAS	PRE-REQUISITOS
	QUINTO CICLO	
24	Patología de Sistemas	18, 22
25	Fisiopatología II	19
26	Nosología Básica I	Todo el ciclo anterior.
27	Psiquiatría I	20
28	Medicina Preventiva	21
	SEXTO CICLO	
29	Nosología Básica II	Aprobar quinto ciclo.
30	Psiquiatría II	27
31	Introducción a la Clínica	26
32	Componentes Culturales II	23
33	Medicina Comunidad I	12, 21, 28
34	Patología Clínica	24
	SEPTIMO CICLO	
35	Medicina de la Comunidad II	33
36	Medicina I	29, 31
37	Cirugía I	29, 31
38	Medicina Forense y Deontología Médica	24
39	Sociología	32
	OCTAVO CICLO	
40	Medicina Comunidad III	35
41	Gineco Obstetricia I	Ciclo anterior
42	Pediatría I	Ciclo anterior
43	Dermatología Clínica	38
44	Seminario Humanístico	39
	NOVENO CICLO	
45	Gineco Obstetricia II	41
46	Medicina de la Comunidad IV	40
47	Pediatría II	42
48	Antropología Médica	44

No. ORDEN	MATERIAS	PRE-REQUISITO
	DECIMO CICLO	
49	Medicina II	Aprobar [illegible] ciclo [illegible]
50	Cirugía II	Aprobar [illegible] ciclo. [illegible]
51	Medicina de la Comunidad V	Aprobar [illegible] ciclo. [illegible]
52	Antropología filosófica	Aprobar [illegible] ciclo. [illegible]
	ONCEAVO Y DOCEAVO CICLO	
53	Internado en Medicina (2 1/2 meses)	Aprobar [illegible] ciclo.
54	Internado en Cirugía (2 1/2 meses)	Aprobar [illegible] ciclo.
55	Internado en Salud Pública (2 meses)	Aprobar decimo ciclo.
56	Internado en Pediatría (2 1/2 meses)	Aprobar décimo ciclo.
57	Internado en Ginecología y Obstetricia (2 1/2 meses)	Aprobar décimo ciclo.
	TRECEAVO CICLO	
58	Servicio social obligatorio - 40	Aprobar ciclo anterior
	CATORCEAVO CICLO	
59	Servicio social obligatorio	Aprobar ciclo anterior.
	Tesis de Grado.	

APPENDIX VIII

ROLE OF US/AID--SUGGESTED DIRECTIONS

SUGGESTED DIRECTIONS FOR US/AID

A. Potential for Bi-national Health Sector Assistance

In the view of many, Cuba has successfully employed health as a tool of foreign policy. Others have seen the Peace Corps as a mechanism for advancing United States interests in the Third World. Whatever the program or the country, people to people assistance has always proved effective in building bridges between nations.

An argument could be advanced that El Salvador represents an ideal location for testing the theory that bi-national health assistance on a massive scale could promote social development and enhance relationships between the recipient and donor nations. Geographically, El Salvador is sufficiently small that a country-wide health assistance program could be mounted at relatively low cost. Given the political crisis currently underway in El Salvador and the tensions this has created in the United States, the potential for obtaining necessary resources may be uniquely present. The current situation even offers an opportunity to explore diversion of resources currently going into military operations and divert them to a national health assistance program. Few settings offer such a clear-cut opportunity for experimentation.

A key element in any such large scale bi-national health assistance program is that it not be unilaterally directed toward one side or the other in the current conflict. It must be made available to all Salvadorans and must not tie the United States to the policies of a particular government in El Salvador.

Paradoxically, what is being proposed is a political experiment that is both political and apolitical. It is political in the sense that, if successful, it would serve the expressed interests of the United States government in achieving closer linkages with the people of El Salvador. It is apolitical in that, if it is to succeed, it must avoid identification with one side or the other in the current conflict, but be administered even-handedly for all the Salvadoran people.

The Pan American Health Organization has recommended a $66 million program of health assistance for Central America and Panama. (2) While the purpose of this report is to make recommendation only with reference to El Salvador, the potential of such an integrated health assistance program for all the countries in Central America and Panama should be considered. It is possible that a portion of this should be administered bi-nationally and other portions through some form of multi-national assistance.

B. Need for Multi-National Funding

The identification of AID with the government of the United States and the consequent identification of the government of the United States with national governments around the world, may, in some instances, mitigate against bi-national funding. In these cases, assistance from the U.S. government is often acceptable if it is provided in a multi-national format. Assistance given to the PAHO-sponsored program for health in Central America and Panama, for example, may most effectively be

administered in a multi-national setting--even though funds come from individual donor nations.

Organizations such as the Interamerican Development Bank, Pan American Health Organization and the International Red Cross relate to problems in El Salvador in ways which United States agencies working alone could never achieve. Accordingly, strong continuing support for these successful multi-national and international organizations should be continued. If health itself is an end point in promoting social stability and an improved lifestyle, then it should not matter whether it is achieved through bi-national or multi-national funding. Rather, a pragmatic approach should be used so that whatever is most effective in attaining the overall goal is the method chosen.

C. International Health Service Corps

For some years the concept of an International Health Service Corps has been under consideration in the United States government circles. In recent itmes this has been best articulated in the International Health Bills of 1977 and 1978 sponsored by Senators Javits, Kennedy, and others. Whatever title it is given, the International Health Service Corps concept envisions sending health personnel from the United States to work in areas of need around the world.

One perspective of an International Health Service Corps is that it be made up of primary health care workers who would actually become involved in clinics and other health care delivery settings in the overseas context. This would be not unlike the role played by the National Health Service Corps or the Indian Health Service in the United States. Presumably, it would also parallel the model employed by Cuba in its exportation of medical knowledge to other countries in the hemisphere and abroad. Although less international and more a result of economic forces than government programming, a similar situation might be that of Egypt, which has long been an exporter of health personnel to surrounding countries in the Middle East.

Another model for an International Health Service Corps is that of sending helth personnel trained in areas of special need that can be of assistance to the recipient country. This has been the traditional model employed by the United States, although frequently concentrating on the medical specialties involved in health care delivery. Were this variant of an International Health Service Corps to be applied to the current situation in El Salvador, given the "health for all" theme, it might imply sending experts in sanitation, education and nutrition--as well as medical care delivery. It might also imply sending community organizers and others who would work with local health personnel in creating greater degrees of community participation in the health care delivery system.

Whatever model--or combination of models--of an International Health Service Corps were adopted, a common denominator needs to be the training of local health personnel to continue the tasks begun by the Corps. Ultimately, the responsibility for health care at all levels in El Salvador must rest with Salvadorans. Thus the efforts of an International Health Service Corps, were it to be considered by the Congress and the

Administration, should be directed toward enhancement of local capacity to continue whatever is begun.

A one-time opportunity may now exist to implement an International Health Service Corps, whether it be only for El Salvador or for a larger global effort. That is the surplus of personnel generated through the old National Health Service Corps Scholarship Program for use in domestic sites. It is a well known fact that for the past couple of years the administration has been moving current NHSC providers out of established slots in order to accommodate the influx of new graduates previously awarded NHSC scholarships. When this relative surfeit of providers is coupled with the intentional elimination of eligible sites, the problem of over supply becomes even more acute. In other words, there is now a pool of obligated individuals willing and prepared to serve their country in health related activities which could be used to the advantage of an International Health Service Corps.

The mechanism by which this could be accomplished is unclear. One possible solution is simply to allow NHSC scholarship recipients to fulfill their service requirement in either international or domestic settings. A simple word change in the existing law could probably achieve this result. Clearly, at least for those already in the pipeline, such an assignment would have to be voluntary and, most probably, could be made honorary. The attractiveness of overseas sites is such that, in all likelihood, a substantial number of current obligates would volunteer for service in various overseas settings if offered the chance to do so. US/AID may wish to explore this possibility with the Congress and within the Administration.

APPENDIX IX

MISSING, KILLED AND IMPRISONED PERSONS

UNIVERSITY OF EL SALVADOR MEDICAL SCHOOL

1980-83

Required page for POSICION O CARGOS DESEMPENADOS

APPENDIX X

CURRICULUM VITAE

ANDREW W. NICHOLS, M.D., M.P.H.

CURRICULUM VITAE

Andrew W. Nichols, M.D., M.P.H.

PERSONAL DATA

PLACE OF BIRTH: [redacted]

DATE OF BIRTH: [redacted]

FAMILY STATUS: Married September 6, 1965 to Ann Marie Weaver.
Children: Catherine Ann, Born May 17, 1970.
Michael Garrison, Born June 20, 1972.

OFFICE ADDRESS: Department of Family and Community Medicine, College of Medicine, University of Arizona, Tucson, Arizona, 85724.

PHONE NUMBERS: Office: (602) 626-6244.
[redacted]

EDUCATIONAL DATA

A.B. In Psychology and Zoology conferred 1959. Swarthmore College, Swarthmore, Pennsylvania. With Honors.

M.D. in Medicine conferred 1964. Stanford Medical School, Palo Alto, California.

M.P.H. in Health Services Administration and Tropical Public Health conferred 1970. Harvard School of Public Health, Boston, Massachusetts.

POST-DOCTORAL TRAINING AND EMPLOYMENT

1964-66 Intern and Assistant Resident in Internal Medicine at St. Luke's Hospital, New York, New York.

1966-68 Surgeon, U.S. Public Health Service with Assignment to Peace Corps, Peru:

1966-67 Peace Corps Physician in Cuzco, Peru.

1967-68 Senior Peace Corps Physician in Lima, Peru.

1968-69 Resident in Internal Medicine at St. Luke's Hospital, New York, New York and, simultaneously, Resident in Public Health at New York City Health Department.

1969-1970 Student in Public Health at Harvard School of Public Health, Boston, Massachusetts.

(Postdoctoral Training and Employment)

1970-1975 Assistant Professor of Family and Community Medicine, University of Arizona College of Medicine, Tucson, Arizona.

1975-1981 Associate Professor of Family and Community Medicine, University of Arizona College of Medicine, Tucson, Arizona.

1981-Present Professor of Family and Community Medicine, University of Arizona College of Medicine

1977-1978 Robert Wood Johnson Health Policy Fellow, Institute of Medicine, National Academy of Sciences, Washington, D.C. (While on sabbatical leave from University of Arizona.)

First Term Office of Senator Jacob Javits (R., N.Y.);

Second Term Offices of Representative Andrew Maguire (D., N.J.) and Dr. Julius Richmond (Assistant Secretary for Health, DHEW, and Surgeon General, USPHS).

1977-78 Post Graduate Fellowship in Community Medicine, Georgetown University, Washington, D.C. (While on sabbatical leave from the University of Arizona.)

PROFESSIONAL CERTIFICATION

Board Certified - American Board of Preventive Medicine, 1971.

Board Certified - American Board of Family Practice, 1978.

Medical Licensure - State of Arizona, 1970. (Also licensed in California, Massachusetts and New York.)

PROFESSIONAL INTERESTS

Policy Formulation and Legislation, with particular emphasis on:

1. Health Care System Development, including

   A. Rural Health

   B. Prepaid Health Care

   C. Public Financing and Delivery Mechanisms

2. Primary Care, including

   A. Allied Health Professionals

   B. Family Practice

(Professional Interests)

C. Quality Assurance

3. International Health, including

A. Tropical Public Health

B. Health Services for Developing Countries

C. U.S.-Mexico Border Health Programs

4. Disease Prevention, including

A. Health Education

B. Drug Abuse Control

C. Environmental Health

HONORS, FELLOWSHIPS, AND FOREIGN TRAVEL

1. Honors Graduate, Swarthmore College, 1959.

2. Smith, Kline and French Fellow for work and study at Hospital Evangelico, Rio Verde, Goias, Brazil (ten weeks), 1963.

3. National Institutes of Health Fellowship for travel and study abroad in Guatemala and Panama (three weeks each), 1963.

4. Louisiana State University Fellowship in Tropical Public Health with assignment to Puerto Rico (one week), Costa Rica (three weeks) and Colombia (three weeks), 1969.

5. Louisiana State University Fellowship in Tropical Public Health with assignment to Puerto Rico (one week), 1970.

6. National Finalist, The President's Commission on White House Fellows, 1972.

7. Invited Participant, Human Dimensions in Medical Education Seminar, Center for Studies of the Person, La Jolla (four days), 1974.

8. Invited Participant, Seminar on Medical Ethics, National Endowment for the Humanities, Philadelphia (one month), 1974.

9. Appointed Delegate, Medical Aid for Indochina Visit to the Democratic Republic of Vietnam and the Provisional Revolutionary Government of South Vietnam, Vietnam (three weeks), 1974.

10. Robert Wood Johnson Health Policy Fellow, Institute of Medicine, National Academy of Sciences, Washington, D.C. (one year; see Post-Doctoral Training and Employment), 1977-78.

11. World Health Organization Fellow, Study of Rural Primary Care Programs and Tropical Public Health in Egypt, Sudan, Bahrain, Israel and other Middle Eastern countries (two months), 1979.

12. Fellow, American College of Preventive Medicine, 1979.

13. Fellow, American Academy of Family Physicians, 1979. (Fellowship conferred, 1980.)

14. Elected Councilor, Alumni Council, Harvard School of Public Health, Harvard University, three year term (1980-83), 1980.

15. Appointed Examiner, Preventive Medicine Section (Part II), National Board of Medical Examiners, four year term (1981-85), 1981.

16. Tour Director, "Community Medicine and Primary Care in the Middle East", Study Tour of Israel and Egypt (three weeks), 1981.

17. Invited Participant, Christian Medical Commission, Seminar on Death and Life in Different Cultures, World Council of Churches, Ecumemical Institute, Bossey, Switzerland (one week), 1981.

18. Elected President, Arizona Public Health Association, one year term (1982-83), 1982.

19. Elected President, The Physicians Forum, one year term (1982-83), 1982.

20. Elected to the Board of Directors, National Rural Primary Care Association, 1982; re-elected to two year term (1983-85), 1983.

21. Elected to Governing Council, U.S.-Mexico Border Health Association, 1982.

22. Selected Participant, Leadership Tucson (sponsored by Tucson Chamber of Commerce), 1983.

GRANT AND CONTRACT DEVELOPMENT:

(Involved either as sole or significant participant in application process; Dollar amoaunts are approximate. "P.D." indicates Project Director.)

1. Health Maintenance Organization, Planning and Development Grants, $233,000, 1972-73, P.D. (To U. of A. and Group Health of Arizona.)

2. Weatherhead Marana Facility Grant, $10,000, 1974. (To Marana.)

3. Hill-Burton Marana Facility Grant, $225,000, 1974. (To Marana.)

4. Medical Student Traineeship Program Grants, $46,000, 1972-76, P.D.

5. Weatherhead-Marana Consumer Healtha Education Grant and Minority Student Health Career Scholarship Award, $43,000, 1973-76, P.D.

(Grant and Contract Development)

6. General Research Support Health Outcome Study Grant, $4,000, 1974, P.D.; and Chagas' Disease Study Grant, $4,000, 1975.

7. Tropical Public Health Educational Program Development Award, $45,000, 1974-76, P.D.

8. Health Manpower Distribution Demonstration Project Contract, $211,000, 1974-76, P.D.

9. Family Practice Primary Care Preceptorship Program Grant, $65,000, 1975-76.

10. Weatherhead Border Health Fellowship Program Grant, $19,000, 1975-77, P.D.

11. Mulcahy International Health Scholarship Grant, $1,000 per year (continuing commitment), 1976-present, P.D.

12. National Health Service Corps Designation, Personnel and Material Provided, 1972-77. (To Marana and Benson.)

13. Arizona Health Service Corps Contract, $101,000, 1976-77. (To U. of A. and Arizona Medical Association.)

14. A.I.D. (211-D) International Health Program Grat, $40,000, 1976, P.D. (Part of larger 211-D grant to U. of A.; P.D. for health program only.)

15. Rural Health Initiative Grant, $365,000, 1975-76, P.D. (To U. of A. and Arizona Rural Health Federation.)

16. "CETA" Rural Health Program Contract, $106,000 (for 19 employee salaries and operational support), 1977-78, P.D.

17. Rural Health Planning for the State of Arizona Contract, $25,000, 1980-81, Co-P.D. (To Departments of Family and Community Medicine and Public Policy, Planning and Administration.)

18. Primary Care Research and Demonstration Project Grant, $199,000, 1980-81; $100,000, 1981-82; $252,000, 1982-83, P.D.

19. Border Health Focused Research Agenda Development Project, $35,000, 1981-82, P.D.

20. AHCCCS Evaluation Design Study Award, $12,000, 1982, P.D.

21. National Health Service Corps State Management Contract, $100,000, 1982; $95,000, 1983, P.D.

22. National Health Service Corps Special Language Training Grant, $10,000, 1983, P.D.

23. Community Health Center (330) Grant (with United Community Clinics of Continental, Arivaca, and Three Points), $427,573, 1983, P.D. (Pending).

(Grant and Contract Development)

24. Community Health Prevention Proposal, $41,946, 1983, P.D. (Pending).

25. AHCCCS Primary Provider Contract, (for up to 7,000 enrollees), $235,000 administrative budget and $7,000,000 cash flow (with full enrollment), 1983, P.D. (Pending).

TEACHING RESPONSIBILITIES

1. Senior Elective Curriculum (Phase III) Coordinator, Department of Family and Community Medicine, 1973-1982.

2. Preparation for Clinical Medicine Coordinator, Department of Family and Community Medicine, 1978-1982.

3. Development and supervision of teaching opportunities for medical students and family practice residents in selected rural sites, 1970-present.

4. Coordination of medical student placement in various international sites (including Mexico), and development of interdepartmental elective course offering in Tropical Public Health, 1972-present.

5. Preceptor, Graduate Student Non-Medical Internship Program, 1972-present.

6. Director, Medical Student Traineeship Program, 1972-1977.

7. Director, Family Practice Assistantship Program, 1978-present.

8. Coordinator, Interdepartmental Course on Current Issues in Health Care, taught jointly by Colleges of Nursing, Pharmacy, Business Administration and Medicine, 1976-present.

9. Instruction of students in physical diagnosis, patient assessment, epidemiology, rural health, tropical medicine, cross-cultural medicine, and special projects, 1971-present.

10. Advisor to CUP Program, 1979-present.

ADMINISTRATIVE RESPONSIBILITIES

1. Chief Medical Officer (with administration responsibility for five physicians plus support staff, serving over 200 Peace Corps volunteers), Peace Corps Peru, U.S.P.H.S., 1967-1968.

2. Assistant Resident and Resident in Internal Medicine (with administrative responsibility for Methadone Maintenance Program and Community Health Issues Forum), St. Luke's Hospital, New York, New York (1965-1966 and 1968-1969).

(Administrative Responsibilities)

3. Project Director on approximately $2,000,000 in grant and contract support, University of Arizona, 1975-present. Responsible for assuring satisfactory performance, from both a fiscal and programmatic perspective.

4. Director, Rural Health Office, University of Arizona (with over 20 FTE employees, offices in Phoenix and Tucson, and an annual budget of approximately $750,000), 1980-present.

5. Director, Famli-Care Office, University of Arizona (with 5 FTE employees and responsibility for administering AHCCCS--through Arizona Family Physicians IPA--and Neighborhood Health Care Plan for University-based enrollees; annual administrative budget of approximately $85,000 and cash flow of approximately $750,000 per year), 1982-present.

UNIVERSITY OR PROFESSIONAL COMMITTEE SERVICE

1. College of Medicine/University Hospital

Committee assignments include:

A. Participation in various subcommittees of the Committee of Nine, including the Subcommittee for Residency Programs, 1974-1975.

B. Honors and Awards Committee, 1973-1976.

C. Student Progress Committee, 1975-77.

D. Phase III Committee (Chairman), 1975-77; Electives Committee, 1978-present.

E. Infections Committee, 1978-present.

Additional committee responsibilities include interviewing for the Admissions Committee, 1976-77 and 1979-1980.

2. University Committees

Committee assignments include:

A. Weatherhead Scholarship Committee, 1973-77.

B. Committee on Commencement, 1973-present.

C. Panel Member, Honors Coordinating Board, 1973-1977.

D. Kitchen Cabinet (Advisory to University President), 1978-80.

E. Health Policy Research Committee, 1978-present.

F. Acadeic Freedom and Tenure Committee (elected), 1983.

3. State Committees

Committee assignments include:

A. Health Manpower Committee, Arizona Medical Association; and Section on Rural and Migrant Health (Chairman), 1973-77.

B. Environmental Health Committee (Chairman), Arizona Academy of Family Physicians, 1973-76.

C. Health Administration, Research and Planning Section (formerly Medical Care Section--Chairman, 1976-78), Arizona Public Health Association, 1976-present, (Member of the Board, 1981-84 and President, 1982-83).

D. Health and Environment Committee, Governor's Commission on Arizona Environment, 1976-present.

E. Public Health Committee (Chairman), Arizona-Mexico Commission, 1978-present.

F. Legislative Committee, Pima County Medical Society, 1983-present.

4. National Committees

Committee assignments include:

A. Program Committee, Medical Care Section, American Public Health Association (Vice-Chairman, 1973-74); Committee on Improving Health Services Through Public Participation, Medical Care Section (Chairman, 1978-80); Nominations Committee, Medical Care Section (Chairman, 1979-81).

B. Council on Financing, American Hospital Association; Special Committee on Financing Comprehensive Health Care Delivery Organizations (Chairman, 1972-75).

C. Various Committees, The Physicians Forum, 1971-present (National Vice-President, 1975-76 and President, 1982-83).

D. Interim Steering Committee, Health Council, Rural America, 1977-80.

E. Adult Lung Committee, American Lung Association, 1978-80.

F. Legislative and Conference Committees, National Rural Primary Care Association, 1982-present.

G. Health Administration Section, U.S.-Mexico Border Health Association (Secretary), 1982-present; Nominations Committee, 1983-84.

(National Committees)

CLINICAL SERVICE

1. Weekly participation in Today Clinic, Family Practice Office, University of Arizona. Clinical care of patients presenting for a variety of primary care problems. 1979-80.

2. Monthly attending responsibility with Family Practice Residents, Family Practice Office. 1979-present.

COMMUNITY SERVICE

Various community service activities are not included in the following list. Only those which are in some way health related, directly or indirectly, and have involved participation since 1975 are noted.

1. Leadership Tucson - Chosen to participate in this four month training program for community leadership and service. Thirty Tucsonans selected annually on a competitive basis by a committee of the Tucson Chamber of Commerce. Class of 1983.

2. Candidate for Arizona State Legislature - Ran for Arizona House of Representatives, Democrat, District 13, November, 1982, gaining some 22% of vote (25% needed to elect).

3. General Board, Christian Church (Disciples of Christ) - Elected member of national governing body of this 1,300,000 member denomination, with service on section responsible for National Benevolent Association, which operates all health and social service societies of the Christian Church in the United States. Four year term (1982-86).

4. Habitat for Humanity - Member of the founding board of this group devoted to development of low cost housing for Tucson, 1979-present (Vice-President, 1982-83). Related to an international organization of the same name, Habitat in Tucson sees the relationship between decent housing and a healthful environment and is currently building approximately one home every three months.

5. Arizona-Mexico Commission - Chairman, Public Health Committee, 1980-83 (Member, 1978-present). Responsible for coordinating extensive program (four meetings per year) in association with counterpart from Sonora-Arizona Commission.

6. Arizona Partners of the Americas - Member of the founding board and Chairman, Health Committee, 1979-1981. Arizona Partners promotes bilateral social, economic and cultural ties between Arizona and Mexico.

(Community Service)

7. United Campus Christian Ministry - Campus Christian Center - Member of the Board of Directors 1975-77 and 1978-1981, of this group representing Christian (Disciples of Christ), U.C.C. and Presbyterian Churches on campus. Member of planning committees for 1977 lecture series on Health and Human Rights (held at the Arizona Health Sciences Center and co-sponsored by the Arizona Council on the Humanities) and 1980 seminar on Wholistic Health (held at the Campus Christian Center and co-sponsored by the Division of Social Perspectives in Medicine).

8. El Rio - Santa Cruz Neighborhood Health Center - Worked as physician in Center when it first opened and was part of Department of Community Medicine (1970-71). Subsequently, represented the University of Arizona as appointed member of the Board of Directors from 1978-1982. Chairman, Quality Assurance Committee, and member, HMO committee.

9. Amigos De Las Americas - Vice-President, 1973-74 and President, 1974-75. This broadly based community group sends high school and college students (44 in 1974-75) to Latin America for medically related service. Extensive training program is conducted in the Arizona Health Sciences Center each spring. Participant in volunteer training in tropical public health, 1973-present.

10. West Pinal Family Health Center - Instituted as part of Arizona Job Colleges, a migrant worker social rehabilitation program, the West Pinal Family Health Center provides extensive health care to a population of rural poor and seasonal farm workers in central Arizona. Helped obtain original grant, then served as member of the board, 1972-76 (AJC) and 1976-1978 (WPFHC).

11. Free Clinic of Tucson - Working through a local church group, helped initiate and develop what has become the Free Clinic of Tucson, Subsequent to that served on the Board of Directors of the clinic (1971-75) and provided medical service in the clinic setting (1972-77).

12. Community Organization for Drug Abuse Control - After consulting in connection with the establishment of Methadone Maintenance Program for Tucson Southern Counties Mental Health Program, joined board of umbrella community drug abuse control organization (CODAC) and served from 1973-77.

13. Santa Cruz Valley Health Foundation - Served as consultant to development of the Foundation, then served as a member of its founding Board of Directors, 1975-77.

LIST OF PUBLICATIONS AND PRESENTATIONS

Book:

1980 - Burton, L., Smith, H., and Nichols, A., Public Health and Community Medicine, Third Ed., Williams and Wilkins, Baltimore, September, 1980, 599 pps. (33% responsible)

Refereed Journal Articles:

1981 - Nichols, A., Rojas, O., Terminel, M., and Maier, W.: "The Weatherhead Border Health Fellowship - An Experiment in Cross-Border Medical Education." Accepted for publication as a community in the Journal of Medical Education, Vol 56, Sept, 1981, 3 pp. (Based on a presentation to the U.S. - Mexico Border Health Association) (75% responsible)

1981 - Nichols, A.: "Primary Care in the Middle East." Tropical Doctor, Journal of the Royal Academy of Medicine, Vol. II, No. 4, October, 1981, pp. 166-173. (Based on a World Health Organization Report) (100% responsible)

1981 - Hillman, D. and Nichols, A.: "Current Issues in Rural Health: The Arizona Perspective." Arizona Review, Vol. 30, No. 1, April, 1981, pp. 20-32. (25% responsible)

1981 - Nichols, A.: "Ethics of the Distribution of Health Care." The Journal of Family Practice, Vol. 12, No. 3, March, 1981, (Based on a presentation to the Arizona Academy of Family Physicians) (100% responsible)

1981 - Nichols, A.: "Beyond Medicaid." Arizona Medicine, Vol. 38, No. 1, January, 1981, pp. 37-45. (Based on a presentation to the American Association of University Women) (100% responsible)

1980 - Nichols, A.: "Physician Extenders, the Law and the Future." The Journal of Family Practice, Vol. 11, No. 1, July, 1980, pp. 101-108. (Based on a presentation to the Arizona Association of Physician Associates) (100% responsible)

1980 - Nichols, A.: "A New Approach to Public Sector Involvement: The Health Service District." Journal of Public Health Policy, Vol. 1, No. 2, June, 1980, pp. 121-140. (75% responsible)

1979 - Nichols, A.: "Development in the United States of America for International Health." International Association of Agricultureal Medicine and Rural Health Journal, Vol. 4, No. 1, 1979, pp. 6-14. (Based on a presentation to the VIIth International Congress on Rural Medicine) (90% responsible)

1978 - Longwell, W., Miller, J., and Nichols, A.: "Counselor Effectiveness in a Methadone Maintenance Program." International Journal of the Addictions, Vol. 13, No. 2, January-February, 1978, pp. 307-315. (33% responsible)

1977 - Navin, T., and Nichols, A.: "Evaluation of Arizona Medical Student Exchange Program." Journal of Medical Education, Vol. 52, No. 10, October, 1977, pp. 817-823. (40% responsible)

1976 - Nichols, A., and Vanselow, N.: "Rural Health Program," Dean's Page. Arizona Medicine, Vol. 34, No. 3, March, 1977, pp. 164-165. (90% responsible)

1975 - Nichols, A.: "Vietnam Diary." Swarthmore College Bulletin, Vol. LXXII, No. 6, July, 1975, pp. 12-18. (90% responsible)

1973 - Ciulla, S., and Nichols, A.: "Learning to Go It Alone." Health Services World, Vol. 8, No. 5, June-July, 1973, pp. 6-9. (25% responsible)

1971 - Nichols, A., Salwen, M., and Torrens, P.: "Outpatient Induction to Methadone Maintenance Treatment for Heroin Addiction." Archives of Internal Medicine, Vol. 127, No. 5, May, 1971, pp. 903-909. (80% responsible)

1967 - Mezey, S., Nichols, A., and Holt, P.: "Tuberculous Illeoduodenal Fistula." Gastroenterology, Vol. 52, No. 1, January, 1967, pp. 83-87. (33% responsible)

Refereed Presentations at Scientific Meetings:

1982 - Nichols, A., Hillman, D., and King, B.: "The Arizona Experiment--A Medicaid Alternative under the New Federalism." Paper presented to the 110th Annual Meeting of the American Public Health Association, Montreal, Canada, November 17, 1982. (75% responsible)

1982 - Nichols, A.: "The University of Arizona Rural Health Office." Paper presented to National Conference on Rural Primary Care, Jackson, Mississippi, Aptil 3-6, 1982. (100% responsible)

1982 - Nichols, A.: "Heath Across the Border: The Work of the Public Health Committee of the Arizona-Mexico Commission." Paper presented to 40th Annual Meeting, U.S.-Mexico Border Health Association, Tijuana, Mexico, April 20, 1982. (100% responsible)

1981 - Newman, J., and Nichols, A.: "Cost Recovery from Utilization of the University of Arizona Health Sciences Center by Mexican Nationals: 1977-78 and 1979-80." Paper presented to U.S.-Mexico Border Health Association Annual Meeting, Phoenix, Arizona, June, 1981. (33% responsible)

1980 - Nichols, A., Rojas, O., and Terminel, M.: "The Weatherhead Border Health Fellowship - An Experiment in Cross-Border Medical Education." Paper presented to U.S.-Mexico Border Health Association Annual Meeting, Saltillo, Mexico, April, 1980. (90% responsible)

1979 - Nichols, A., Harkin, J., and Rest, K.: "A New Approach to Public Sector Involvement: The Health Service District." Paper presented to Medical Care Section at American Public Health Association Annual Meeting, New York, November, 1979. (75% responsible)

1979 - Nichols, A., Harkin, J., Rest, K.: "The Health Service District: An Alternative Approach to the Financing, Organization, and Delivery of Health Care." Roundtable presentation to Health Administration Section at American Public Health Association Annual Meeting, New York, November, 1979. (33% responsible)

1978 - Nichols, A., and Javits, J.: "The International Health Act of 1978 - An Agenda for the Future." Talk to the National Council for International Health Annual Meeting, New York, New York, May, 1978. (75% responsible)

1978 - Nichols, A.: "Development in the United States of America for International Health." Presentation to the VIIth International Congress on Rural Medicine, Salt Lake City, Utah, September, 1978. (100% responsible).

1977 - Miller, J., Shaw, P., Walls, K., and Nichols, A.: "Serological Studies for T. cruzi in Papago Indians in Southern Arizona." Poster Session presentation to American Society of Tropical Medicine and Hygiene Annual Meeting, Denver, November, 1977. (20% responsible)

1977 - Nichols, A., and Clarfield, S.: "The Team Teaching Model Site Alternative." Presentation to A National Workshop on Medical Preceptorships, Madison, Wisonsin, October, 1977. (50% responsible)

1974 - Nichols, A., McDonald, J., Abrams, H., Vuturo, A., and Miller, J.: "Introduction of Tropical Public Health Teaching into the Curriculum of a New Medical School." Paper presented to American Society of Tropical Medicine and Hygiene Annual Meeting, Honolulu, November, 1974. (75% responsible)

1974 - Nichols, A., Lassik, W., and Rimple, H.: "The University and the National Health Service Corps: United in Service to Underserved Areas." Paper presented to Medical Care Section at American Public Health Association Annual Meeting, New Orleans, October, 1974. (75% responsible)

1973 - Abrams, H., and Nichols, A.: "Introduction of a Rural Health Care System into Isolated Southern Arizona Communities." Presentation to First Asian Congress of Rural Medicine, Usuda, Japan, October, 1973. (25% responsible)

Published Reviews, Proceedings, Reports, and Films:

1982 - Nichols, A., et al: A Survey of Rural Health Activities: Involvement of U.S. Medical Schools and U.S. State Health Departments in Rural Health, 136 pgs. (50% responsible)

1982 - Nichols, A., et al: Proceedings of the 9th Annual Arizona Conference on Rural Health, Track I: Critical Care in Rural Arizona, Track II: Effect of the New Federalism on Health Care in Rural Arizona, 140 pgs. (25% responsible)

1981 - Nichols, A., et al: Border Health Focused Research Agenda Development Conference Proceedings, 1981, 141 pgs. (25% responsible)

1981 - Nichols, et al: Proceedings of the 8th Annual Conference on Rural Health, Track I: Emergency Medical Care in Rural Arizona, Track II: Developing a Comprehensive Health Care Plan for Rural Arizona, 141 pgs. (25% responsible)

1979 - Nichols, A.: Review of "The Quick Knife: Unnecessary Surgery, U.S.A." In Sociology: Reviews of New Books, Vol. 7, No. 1, Nov.-Dec., 1979, pp. 18-19. (100% responsible)

1978 - Nichols, A.: Review of "Rural Health Services: Organization, Delivery and Use." Contemporary Sociology, Vol. 7, No. 5, 1978, pp. 606-607. (100% responsible)

1977 - Nichols, A., and Clarfield, S.: "The Team Teaching Model Site Alternative." Proceedings of A National Workshop on Medical Preceptorships, Un. of Wisconsin, October, 1977, pp. 364-378. (50% responsible)

1976 - Nichols, A., Hart, R., and Canella, M.: New Horizons, Movie on Rural Health Programs in Southern Arizona. University of Arizona Biomedical Communications, 1976, 30 minutes, sound, color. (33% responsible)

1975 - Financial Relationships between Hospitals and Comprehensive Health Care Delivery Organizations, A. Nichols, Chairman. Final report of Special Committee on the Financing of Comprehensive Health Care Delivery Organizations, American Hospital Association, Chicago, Illinois, 1975, 24 pp. (50% responsible)

1975 - Levinson, D., Nichols, A., McCleary, T.: New Health Practitioners, Movie on Use of Physician Extenders in Arizona. University of Arizona Biomedical Communications, 1975, 18 minutes, sound, color. (20% responsible)

1973 - Abrams, H., and Nichols, A.: "Introduction of a Rural Health Care System into Isolated Southern Arizona Communities." Proceedings, First Asian Congress of Rural Medicine, October, 1973, pp. 59-64. (25% responsible)

1972 - Rural Health and Air Mobility: First Arizona Conference on Rural Health, Ed. by A. Nichols, and G. Looney. Tucson, March 18-19, 1972, 135 pp. (90% responsible)

1971 - Nichols, A., and Abrams, H.: Review of "A Report on Physician Manpower in the Tri-State Region." Annals of Internal Medicine, Vol. 75, No. 2, August, 1971, pp. 328-329. (75% responsible)

Unpublished Reports and Manuscripts:

1981 - Nichols, A., et al: The Rural Health Study, 372 pgs. (Commissioned by the Arizona Department of Health Services). (33% responsible)

1979 - Nichols, A.: WHO Fellowship Report on Primary Health Care in the Middle East. September, 1979, 48 pp. (Revised March, 1980) (100% responsible)

1972-80 - Nichols, A. and Project Collaborators: Annual and Final Reports to Funding Agencies on Various Grants and Contracts where Project Director. (See Section on Grant and Contract Development.) (75% responsible)

1961-62 - Nichols, A.: A Proposed Manner of Introduction of More Adequate Medical Care to a Semi-Isolated Mexican-Indian Community: Parts I (Cultural Survey) and II (Sanitation Survey). January, 1961/62, 26 pp. and 32 pp. (90% responsible)

Non-Refereed Formal Presentations:

Each year while at the University of Arizona (1970-present), responsible for giving approximately twelve to fifteen presentations per year to civic groups, professional associations and health-related conferences. Topics have included prepaid practice, rural health, medical educaton, primary care, physician extenders, health legislation, health policy and international health. Format has ranged from keynote address at California rural health conference to television interview on health care in Vietnam; from New York speech on international health legislation at annual meeting of National Council on International Health (given on behalf of Senator Jacob Javits) to presentation on primary health care at annual meeting of Western Association of Community Health Centers. Audiences have included health care professionals (e.g. talks at AMA rural health conferences), health science students (e.g. talk at Emory University to medical, nursing and dental students), lay groups (e.g. talks to various community groups interested in prepaid health care), and state legislators (e.g. talk in Salt Lake City to regional meeting of state legislators), among others.