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# FY 1978

## (SUBSTITUTE)

# SIERRA LEONE

## VOLUME III

## SECTOR ASSESSMENT: Health, Population and Nutrition

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# DEVELOPMENT ASSISTANCE PROGRAM

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## VOLUME II

## SECTOR ASSESSMENT: HEALTH, POPULATION AND NUTRITION

MARCH 31, 1976

Sierra Leone

Sector Assessment: Health, Population, and Nutrition

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Appendix A: Sierra Leone DAP - Health Sector Field Trip Report, Dec. 9-10, By J.P. Keeve, M.D.

**Volume I - Overview and Strategy**

**Volume II - Agriculture**

SECTOR ASSESSMENT

Sierra Leone

HEALTH - NUTRITION - POPULATION

## Preface

The principal author for the health and nutrition sections of this report was J. P. Keeve, USAID/Monrovia. Principal author for the population sections was James A. Brown, Jr., AID/W. The authors stress that the report is intended as a broad overview of health-related matters in Sierra Leone, not as an analysis in depth. It was prepared as part of an overall Sierra Leone "DAP" exercise in November and December 1975. Its broad and tentative nature results both from the limited time the authors devoted to it and the scarcity and inadequacy of previous analytical work on the Sierra Leone health sector. However, since major AID involvement in the sector is not likely for FY 1976 or FY 1977, the authors believe the assessment is an adequate introduction for short-run and medium-run Sierra Leone AID programming.

## I. INTRODUCTION

British rule in Sierra Leone provided mixed advantages of colonialism that still influence strongly the pace and manner of business and government. The deliberate calmness, stability under stress, regard for authority and seniority, and above all, the comforting familiarity of being an "old-boy", belonging to the right club or clan, and the regard for paper credentials still color official, social, and business intercourse. The people outside Freetown and the Western area, however, live in a typical African tropical setting and cope or accommodate largely in a traditional way to the influences of poverty, ignorance, culture, and disease.

## II. Disease Incidence

The spectrum of disease in Sierra Leone is typical of a poor, tropical country. However its full extent and depth is hard to describe from documented data. The major diseases are: malaria, tetanus, measles, tuberculosis, malnutrition, enterites, leprosy, schistosomiasis and onchocerciasis. About twenty-eight percent of registered deaths occur before age one, half of all deaths before age five, most due to tetanus, pneumonias and dehydration. Almost everyone apparently has had malaria and intestinal parasites. These poverty-related, principally communicable diseases are universally distributed throughout Africa. Gross estimates of prevalence in Sierra Leone are: one million cases of malaria; river-blindness (onchocerciasis), a half-million cases; tuberculosis, 75,000; leprosy and schistosomiasis, at least 25,000 cases each (Ref. 1).

Vital statistics and causes of death are available only for Freetown and the Western Area and were published for the first time in 1973 (for the year 1969-71) (Ref. 2). Influenza and pneumonia were the leading causes of death, followed by cardiovascular disease and accidents (both city-related), with enterites next. Measles killed most children under age five years followed by influenza and pneumonia, enterites, malnutrition and malaria. Yaws, trypanosomiasis and smallpox are supposed to be virtually eliminated due to specific past campaigns against them (Ref. 3). WHO plans to study the prevalence of tuberculosis in 1976.

## III. Rate of Population Growth

Sierra Leone's annual rate of population growth is currently unknown, although by the best professional judgments it appears moderately high on a worldwide scale. A few years ago the GOSL's Central Statistical Office estimated the population growth rate as 1.6 percent annually. Such a low rate would be striking by worldwide LDC standards; however this estimate is no longer considered valid by professional demographers. The United Nations has recently used a 2.6 percent annual growth rate estimate for Sierra Leone, and similar figures are supported by recent limited sample surveys in the Freetown area. Nationwide sample survey data are not available, but the national average rate of population growth is probably at least as high as or higher than the Western (Freetown) area rate, due to the greater proportion of rural and Muslim population in the other areas. Interestingly, population growth rates well

above 3.0 percent per year are commonly cited for Liberia and other neighboring West African nations. Since rural incomes, health conditions, religious attitudes, and other population growth determinants appear similar in all these nations, it does not seem likely that Sierra Leone's growth rate is significantly out of line with those of her neighbors.

Furthermore there is good reason to suspect Sierra Leone's population growth rate will tend to accelerate in the next few years, given the relatively large scope for reducing death rates. The World Bank's 1974 economic report (Ref. 4) predicts for example that the annual population growth rate will be three percent in the 1980's.

## IV. Nutrition Status

There has not been a statistically reliable survey of the nutrition status of the population, but poor nutrition is thought to be contributory in at least half of the deaths in childhood (Ref. 5). Although nutrition status in Sierra Leone, especially the rural areas, probably is similar to other coastal West African countries a current nutrition status survey is desirable.[1]

## V. Determinants of Health

### A. The Environment

Although King (Ref.6) and other authorities claim poverty is the root cause of health problems in developing countries, there are severe physical enviornmental handicaps in the tropics which

1. A limited survey was conducted in 1964. Its methodology, although not clearly explained in the available documentation, does not appear statistically reliable; in any event the results are probably out of date.

no amount of analysis, problem-solving or assistance can change. The interrelationships between food production (nutrition), eudcation (professional training) and the subject sectors are almost too obvious to note.

In tropical countries like Sierra Leone, the complex constraints of foodcrop production; the effect of weather on equipment and maintenance (let alone patient attendance at clinics and hospitals); the very favorable conditions for bacteria, fungi, and parasites; and the effects of ambient conditions cannot be blamed on poverty. These problems will not be entirely eliminated regardless of available resources. They challenge both technical ingenuity and research. The response to this challenge (since it lies outside the usual influence of the marketplace) has been marginal, or the problems have been considered simply not soluble ("excessive" rainfall or poor soils or high temperatures). These problems relate to the concept now generally accepted that "health" is only partially, perhaps minimally, related to medical care. Health is an ecological concept, and the necessary requirements to transform an inhospitable environment (whether natural or man-made) into an optimal setting for life easily might consume most of the resources of government. Water supplies and sanitary facilities, food production and education and all the necessary facilities and manpower required to promote a nurturing environment are far more important than the number of physicians, hospital beds or medicines available to people.

B. Culture and Custom

There are two Sierra Leones. Freetown, the old British Colony and nuclear city is virtually western-industrialized in character and is losing some of its colonial heritage to the increasing influence of world trade and African "unity". The provinces are still essentially tribal. Except for small pockets of urbanization, people there still live in the traditional setting. This geography poses serious problems for government since there are disparate problems in terms of scale, pace, style and need. While neither section can be neglected, the dual priorities, requirements, demands, political pressures, overall national goals and other policy issues are difficult for government to deal with effectively.

The more deep-seated "chicken-egg" dilemma of extended family subsistance farming, marriage and kinship customs, tribal law and religion all make decisions especially difficult for anyone, official, private, or missionary, who attempts to induce the changes required for true development.

C. Status of Women and Children

Salaries, medical supplies, training, capital costs of health, water and sanitation facilities, housing, evironmental management, transport and communications obviously are all affected by rising prices and the worldwide inflation trends. But special note should be made of the impact of budget constraints on the most vulnerable, dependent, and virtually voiceless segment of the population: women and children. Because they are rarely counted part of the

labor force, because they are less educated and hence nearly inarticulate, they are often given a negligible portion of the development budget in practice. This tendency is re-inforced since they are not contributors to development in the monetary sense and is further exaggerated in tribal societies and in Muslim communities. The large extended families associated with primitive agricultural practices and the open acceptance of polygamy create special problems and burdens for program and policy aspects of development concerned with health.

D. Urbanization

Urbanization should not be ignored in analyzing the determinants of health in Sierra Leone. Urbanization is often viewed unfavorably in the "development community" because its problems seem so monumental in the industrial world. It nevertheless has favorable effects and can be an accompaniment (if not a direct prerequisite) of social and economic progress for the inhabitants of poor countries. The high population growth rates that occur in the nuclear cities of these nations and the forces that pull or push migration are not fully understood. Nevertheless the urbanization phenomenon exists (rural development schemes notwithstanding) and creates major problems in the health/nutrition/population sectors, as noted below in the discussion of "Issues and Preliminary Recommendations" (Section XI. E.).

## VI. Determinants of Fertility

Scientific study of human fertility determinants is relatively rare for Africa as compared to other low income regions such as Latin America and Asia. This situation appears due primarily to a lack of appropriate statistical data rather than to lack of interest on the part of demographers and other social scientists. However, such limited results as are available for West African countries seem generally consistent with the patterns that have been well-documented in other low-income areas. These patterns suggest that high fertility and large family size in pesant societies are often rational adaptive responses on the part of the low-income family to its poverty and other unfortunate objective circumstances. It is important for AID to appreciate these patterns of fertility determinants, in order to channel family planning assistance into activities consistent with host countries' objectives and in order to evoke effective long-run responses from low-income people.

### A. Infant and Child Mortality

As a detailed example of fertility determinants, it is helpful here to consider the case of infant and child mortality, since the GOSL's policy on family planning notes that birth control is an integral component of the overall approach to maternal and child health. It is widely held among demographers and population economists that high rates of infant and child mortality are among

the primary causes of high fertility in low-income societies, because the desire for surviving sons to provide old-age support leads parents to replace child deaths with additional births. Furthermore, this replacement is not necessarily on a one-to-one basis, since a "hedging" or "insurance" motive may lead parents to "overshoot the mark". That is, if parents believe they need at least one surviving son to provide their old-age support, they seem in many cases to produce two or three sons just to be on the safe side. Needless to say, the production of two or three sons implies on the average that the family will have one to four daughters, with a total family of perhaps six or seven children. Additional family size motives such as religious beliefs or the demand for children as agricultural laborers can obviously re-inforce or even increase the parents' goals. Interestingly, these theoretical predictions seem borne out by the only large scale investigation of fertility and family planning attitudes in Sierra Leone, conducted by Thomas Dow of the Population Council in 1969-70 (Ref. 7). Dow reports that among rural women, average ideal family size was 6.4 children. Dow did not report husbands' family-size goals, but one would not be surprised to find them higher.

B. Other Non-Biological Fertility Determinants

There is a growing literature by demographers, economists, and other social scientists on the factors that induce large-family goals in LDC's. It is not appropriate to survey this literature here,[1] but among the matters AID strategy should be alert to, in addition to infant and child mortality, the following are among the most important:

(1) Family size in LDC's often seems inextricably bound with the status of women. Family-size limitation and the voluntary acceptance of family planning seem likely to be much more widely spread to the extent that cultural and religious attitudes allow women to work outside the home for pay and to the extent that women's literacy and skill levels make such work economically attractive (both for employers and employees).

(2) Children can be intrinsically valuable to parents in a variety of economic as well as non-economic ways. In traditional LDC agriculture, with its low requirements for skills and capital, children as a source of cheap family labor may be a profitable economic investment. Under these conditions, exhortation about the "economic advantages of family planning" runs the danger of creating its own

1. See William McGreevey et al., The Policy Relevance of Recent Social Research on Fertility, Interdisciplinary Communications Program, Smithsonian Institution, Washington, D.C., 1974.

credibility gap to the extent it runs counter to the peasant's self-perceived (and experienced) economic interests. And in the non-economic sphere, children can perhaps be most valuable of all to LDC parents that are as yet unable or unwilling to spend more and more on Western-type consumer goods.

C. Implications of Non-Biological Fertility Determinants

The point of this discussion of fertility determinants is to suggest that in formulating a population assistance strategy for Sierra Leone, donors cannot afford to proceed under the naive assumption that successful family planning will require merely changed attitudes on the part of local leaders, plus education of poor people about the biological techniques of birth control. Nor is it safe to assume that peasant attitudes about children can be changed significantly by intensive exhortation on the virtues of small families. Persuasion, enhortation, media campaigns, subsidized distribution of contraceptives, and sex education are all programs that should be used in a national family planning program, especially in its first years. But a truly effective long-run population strategy will probably need to grapple over the years increasingly with problems like child health, illiteracy, lack of educational and work opportunities for women, and low agricultural productivity.

VII. Constraints to Sector Development

A. The Nature of Certain Deeply-Embedded Non-Medical Problems

It must be emphasized from the outset that certain critical constraints are beyond short-term solutions, with or without

foreign donor assistance. Furthermore, it seems clear that the long-run solutions to problems of health, nutrition, and population growth in Sierra Leone are not primarily medical, but involve rather a complex and poorly-understood set of cultural, economic, political, and environmental factors. There seems little question, for example, that re-allocations of resources already flowing into Sierra Leone's health sector would do more to improve the population's well-being than any realistically conceivable increase of finances (local or donor). Yet even where the technical requirements of such reallocations are known, the political and organizational techniques to bring them about are infeasible or are unknown.

The low legal and cultural status of women and tribal and religious constraints are consideration that will continue to handicap both social and economic development and about which little can be done with "pure" technical assistance. The same applies to environment. Crowded housing conditions that promote the transmission of disease, high humidity and rainfall also enhance and support the growth of pathogenic organisms. Foreign donor success in helping eliminate most of these constraints is likely to be modest at best. Long-term solutions such as changing fertility and marriage or family attitudes and patterns, decentralizing government administration of services and questions of social justice (equity, equality and beneficence) for the provinces are likely to be

private matters or policy decisions beyond the scope of any AID involvement in Sierra Leone, except perhaps for support of small social science research activities.

B. Shortage of Physical Resources and Skilled Personnel

Budgets and manpower nearly always claim precedence when one discusses bottlenecks or restraints to any sector's development. Table 1 shows the allocation of public funds to health in Sierra Leone. Common guidelines on the proportion of public funds which should be devoted to health range from ten to twenty percent (Refs. 6, 8,9). Looked at in this way, the thirteen to seventeen percent in Sierra Leone might be considered adequate by LDC standards. Management, planning, and allocation of these overall funds is another matter, however; and the implications, international comparisons, or any other interpretation from gross national figures fall apart when specific or categorical health problems are analyzed. The same applies to manpower considerations.

There were about sixty-five physicians from various agencies in the provinces in 1974 and there were seventy-one government medical officers and thirty-five hospital trainees and housemen in Freetown (Refs. 1,10). There were about fifteen pharmacy shops, fifteen private doctors' clinics and sixty-five dispensers with private pharmacies in the country reported in the official directory (Ref. 10). No other sources of this information seem readily available.

Technical leadership gaps are obvious and critical. All medical and health-related training must be obtained abroad - most of this education not relevant to the needs of the country. Fourah Bay College may produce five to ten graduates qualified to enter medical school per year. These graduates would meet the leadership need only if they entered public service; this is highly unlikely.

C. Management of Government Services

The existing administrative organization of the Health Ministry does not promote sufficient decentralization to manage activities in the Provinces or Districts effectively. More authority must be shared with these areas (provided personnel can be trained or recruited). The whole organization should be bound together by an appropriate planning unit capable and equipped to respond to policy decisions reached by government. Further streamlining of the current table of organization according to modern planning and management systems would make more effective use of existing funds, personnel and supplies. The dilemma of civil-service personnel practices (tenure, security, pensions, salary scales, supervision, etc.) is a profound handicap to any reorganization or management scheme.

D. Data Gaps

One critical tool required to make any overhaul of an outmoded colonial-style organization is a modern means of gathering, storing, processing, and analyzing the quantitative information required to

make planning and operational decisions - in other words, reliable data. Underdevelopment means among many other things that there is limited factual information available to formulate hard plans or manage programs efficiently. Health is a notable area which lacks quantitative dimensions for much of its activity.

Vital rates data (births and deaths) are not accurate except from Freetown, and fragmentary information only is available from household surveys. Causes of death data are similarly lacking for most of the country. A medical statistics unit has been established in the Ministry of Health, which estimates it must process about 100,000 records a year, most of them hospital and clinic records. However, this unit is seriously understaffed, lacks equipment and facilities, and must work with outdated forms and records which date from Colonial times.

Similar data gaps appear in the nutrition and population-planning sectors. There is virtually no information regarding the state of nutrition in most of the country and almost no hard facts about neonatal or perinatal mortality. This situation means that fertility information is unreliable. Underregistration errors probably mean that existing fertility estimates are seriously low and do not reveal the urgency and magnitude of the population problem.

## VIII. GOSL Policies Toward the Health Sector

### A. Health Sector Finances

Although total government health expenditures have risen about seven percent per year since 1963 (from Le 2.5 million to

a current estimate for 1975/76 of Le 7.4 million), the health share of total public expenditures has been falling (15.4 percent in 1963 to 6.9 percent in 1975/76 - Le 7,359,668 of a total budget of Le 106,700,223). According to the five-year development plan, the Le 16.8 million planned for investment in the health sector represents 2.7 percent of the total investment in social services, 91.7 percent of it from public sources. Planned per capita health expenditures are Le 2.70 (a sharing of Le 7,359,668 among 2,729,479 people), which is somewhat less than the Le 2.72 in 1970.[1] (It would be more revealing to examine the distribution of these funds geographically and functionally by institution or disease category, but the resources to do such analysis are not available for this report).

B. The Current Health Budget

A full analysis of the 1975 Health Budget is not yet possible since the only published figures are estimates and not actual expenditures (Ref. 11). Of the total Le 7,359,668, only Le 1,700,00 is for actual medical supplies and most of this goes to hospitals, not rural clinics. Only Le 33,000 is spent for infectious disease control. There appears to be no easy way of estimating how these budget items actually become distributed in the provinces. The relatively high ratio of one health civil servant per 620.7 persons suggests that an unusual number of supporting workers are required for the on-line staff.[2]

1. See nables I, and VIII.
2. See Tables V, VII, and VIII

C. Health In The Five-Year Plan - General

The Health Sector section of the five year plan notes the following deficiencies and problems:

1. Fourteen posts for medical officers with public health qualifications remain unfilled.
2. Maternal and child health services have been unable to expand due to lack of staff, equipment and facilities.
3. Health Education and Nutrition Services have been limited because of shortage of personnel.
4. Malaria control functions cannot extend to the provinces, although this disease is a major cause of mortality and morbidity.
5. Full utilization of existing medical staff has been severely impeded due to lack of basic facilities and ancillary sections.
6. Physicians are trained abroad because of lack of local facilities.
7. There are over 100 nursing vacancies for sanctioned posts.
8. Expectation of life and infant mortality rates are not known exactly.
9. 27.8 percent of all female deaths in the reproductive age group are due to complications of pregnancy and childbirth.
10. Of the 1,279 deaths due to malaria in the western area alone, 315 were under one year of age and 531 in the age group one to four.

11. Sixteen percent of the children age 0-9 were infected with tuberculosis, "one of the highest recorded in Africa", and roughly one million children aged 0-14 are exposed to risk of infection.
12. There are 30,000 leprosy patients in the country, including 11,000 infectious cases.
13. Tetanus causes twenty-five percent of all deaths in the first year of life in the Western Area.
14. Cholera, onchocerciosis, enterites and parasites are widespread .

The strategy proposed by the plan to solve these problems is:

1. Decentralization of the Endemic Disease Control unit to provincial and district level. (Note: This will require a multiplication of non-existent staff, relatively large sums for equipment, laboratories and supplies which are also not immediately available without extensive outside help.)
2. Reduction in maternal and infant mortality by expanding and decentralizing the existing meagre resources of the MCH division, by emphasizing child spacing rather than fertility reduction, by demonstrating the "Nutritional values of different local foodstuffs" to mothers, and by offering school health services to children who attend school (Note: These children are already the most fortunate group.).

3. Expansion of health and medical care facilities to reach more people by constructing new health centres and improving existing ones. (Note: Making better use of present facilities and staff might be more feasible at this time.)
4. Provision of "qualified" staff and billeting for them is a matter of deep concern to government. The Training Institute planned at Bo will aim to solve some of the rural staffing problems.
5. Laboratory services will be improved by setting up a National Health Laboratory. (Note: The urgent diagnostic needs of the rural areas will not be met by a central laboratory in Freetown.)

D. Investment Program

The five-year plan calls for capital investment funds of Le 16.9 million but expects Le 10 million to carry over into the next five-year plan. The program is extremely ambitious, and one may doubt that funds will be available for complete implementation. Details of specific items and predicted costs are given in the plan. The most urgent items are the following:

1. Le 1.6 million for Communicable disease control and improvement of water and sewerage systems with two-thirds of cost financed "from foreign sources" and a carryover of Le 120,000 to the next five-year plan.
2. A training institute at Bo. No cost estimate is available. (The original plan called for Le 300,000 for an installation in Waterloo).

3. Twelve new health centres to cost Le 600,000 (one-third from foreign sources).
4. Rural water supplies and sanitation to cost Le one million with a Le 200,000 carryover (two-thirds of the cost to come from foreign sources).
5. Pediatric Clinics to cost Le 630,000 (one-third from foreign sources).
6. A Ministry of Health building in Freetown to cost Le 500,000.
7. Staff quarters for rural health personnel costing Le 5.7 million with all immediate funding needs (Le one million) coming from foreign sources and a carryover of Le 4.7 million to the next plan.
8. Medical school and teaching hospital to cost Le 6.4 million to be funded through loans grants from foreign sources.

E. GOSL Policy Toward Family Planning

The Government of Sierra Leone, in the five-year National Development Plan, published in August 1974, has made a policy statement in favor of family planning. This statement represents a switch from earlier official neutrality (which in practice often was translated into obstructionism) and it has been reaffirmed by several public endorsements from high officials. The GOSL's approach has been to view family planning and birth control as means to improve directly the health of mothers and indirectly the health of children, via pregnancy spacing. The five-year Plan notes

explicitly that even though the GOSL's "health" approach to birth control starts with a different initial emphasis from an outright "fertility reduction" approach, ultimately "the demographic effec of both types of family planning programmes is similar" (National Development Plan, p.20). However in spite of this favorable stance, there has so far been little direct government action to implement and co-ordinate a concrete national program. For example the five-year plan calls for establishment of a National Population Council, with representation from several key Ministries and a Secretariat attached to the Ministry of Development and Economic Planning. The Council's functions would include co-ordination of population-related activities and dissemination of public information on population trends and family planning. But so far the Council has not been appointed. On the other hand the GOSL has recently made a small building grant to the private Planned Parenthood Association of Sierra Leone.

If donors fully appreciate and respect the GOSL policy that family planning must be approached as part of a total maternal and child health program, they should be able to establish good working relationships with the GOSL in this area.

## IX. Current Facilities and Institutions

### A. Facilities

Currently the following types of medical units or facilities are defined (official numbers of each in parentheses):

1. Hospital: at least 20 beds with professional staff (42)
2. Health Centre: limited in-patient facilities for maternity purpose and outpatient facilities for general patients with at least a professional nurse or midwife (36).
3. Maternal and Child Health Centre: outpatient facilities only for prenatal and preschool patients (11).
4. Dispensary: Outpatient clinic staffed by qualified dispensers (131).
5. Native Administration Maternity Centres: Staffed by village maternity assistants or MCH aides; and Mission and Private Maternity Establishments: staffed by qualified midwives (44).

Tables II and III provide a statistical summary of medical establishments from 1966 to 1973 taken directly from the official directory. The reported number of hospitals, beds, staffing, etc. gives little or no indication of whether these facilities are functioning properly or for that matter, at all, or where they are located in relation to the intended recipients of their services. An on-site audit would be needed to do this assessment properly though even a brief, casual inspection such as was conducted for the mission hospitals would be most informative and useful (Ref. 1).

The official report on medical and Health Services for 1961-66 does provide some outdated details regarding physical and staffing changes and needs (Ref. 12).

Details of the administrative structure of the Ministry of Health are published in the Personal Emoluments section of the "Estimates of Revenue and Expenditure, 1975-76", broken down by Divisions: administrative, accounts and stores, medical, national school of nursing, public health nursing, public health, laboratory services and endemic disease control. Estimated costs for these proposed posts amount to Le 4,183,421 of the total official budget for the Ministry of Health of Le 7,359,668 (fifty-seven percent). All the posts are established, pensionable positions except the Minister and his Deputy. Here again, gross figures do not reveal where or how this personnel structure is utilized, whether the positions are filled, and the performances of these 4,397 civil servants. Transportation, utilities, telephones, and sanitary facilities and resources of the government and non-government health units are provided in the last published Statistics of the Health Services (1970). That same report indicates that of the 154 physicians in country at that time, fifty-seven (thirty-seven percent) were non-nationals (Ref. 13).

B. Role of Foreign Assistance

External technical assistance to Sierra Leone in the past few years has been provided for planning, agriculture, administration,

education, and health. UNDP committed approximately two million U.S. dollars worth in 1974; bilateral, relief, and voluntary agencies approximately ten million. The World Food Program, WHO, UNICEF and CARE provided the bulk of health/nutrition assistance while UNFPA and IPPF granted population (demographic) and family planning funds of about one million dollars. The Italian government granted $120,000 for a feasibility study of a new hospital in Freetown, the French and West German governments supported water supply systems (Ref. 14). The EEC's European Development Fund (FED) also indicated in late 1975 it might assume a major role in financing health activities, including the paramedical training institute.

Nutrition programs in low-income countries are almost always a gift of external donors, and Sierra Leone is not an exception. Catholic Relief Services, for example, conducted highly regarded maternal and child care and school feeding programs in cooperation with many other agencies valued at $842,000 in FY 75 which provided assistance to about 100,000 people.

C. Population Activities of Private Organizations and Foreign Donors

Almost all organized family planning activities conducted recently in Sierra Leone have been under the auspices of the Planned Parenthood Association of Sierra Leone, which is an affiliate of the London-based IPPF. The PPA now has eight clinics over the country, with two more under construction, and has about seventy staff members. The Catholic Relief Services and the GOSL Ministry of Health have both recently asked PPA assistance in providing family planning services at MCH clinics, and some

government nurses are now getting training from the PPA. Another private organization is the Population Society of Sierra Leone, which has just been founded. Its President is head of the GOSL Central Statistical Office, and it will focus more on demographic than on bio-medical questions.

Foreign donors have not had many population-related activities in Sierra Leone. The Population Council sent resident demographers in the late 1960's and early 1970's, but it is no longer represented. The IPPF has financed the PPA's activities, as mentioned. The United Nations has financed for several years a demographic training and research unit at Fourah Bay College. CARE developed a program in 1974 to distribute contraceptives along with health and nutrition supplies, but the project was never fully implemented. On the

One observer told the team leader that European donors would probably be able to finance some FP projects if the GOSL should propose them.

## D. STRENGTHS AND WEAKNESSES OF SECTOR INSTITUTIONS

### 1. The Health Ministry

Since the ultimate strength of a public agency is its political leverage, its constituency, and its distance from the centers of official power, the Health Ministry has little priority or authority. The real or "hidden" economic value of health has customarily held little interest for development planners and economists, mainly perhaps because of measurement problems. For example, the impact of health on economic productivity

and health price elasticities in a barter or subsistence economy have almost never been computed. This makes the influence of the health sector on government hard to gauge. The reverse is more easily understood: A mere glance at official budgets will show Government's small expenditures (in relative terms) for health. A special problem for almost all Ministries in Sierra Leone is the abrupt drop in professional calibre below the upper layers of government; the Health Ministry is no exception. (Substantial technical support is provided by foreign donors, however, especially U.N. agencies.)

The Ministry as an "institution" is in a relatively favorable position in terms of physical infrastructure, for there is a network of fixed health installations. With some exceptions, most of the country has an accessible structure within reach of the population. There is a central medical store depot in Freetown, most roads are passable, and there are communications systems.

2. Missionaries

An on-site survey and analysis of Church and Mission Health Programs in Sierra Leone was conducted (May 1975) by a physician with broad knowledge of the subject, and an Organization has been formed to coordinate health activities among the various denominations and the government. If hospital beds alone are used to reckon the extent of services in the provinces, about thirty percent of services are provided by missions and seventeen percent by private and industrial firms. Approximately thirty-six percent of all general hospital beds in the country belong to the missions and the private

sector.

3. Traditional Healers

One of the major weaknesses of any discussion of social services in Sierra Leone is the almost total lack of information concerning the small entrepreneur. First, there is the deliberate indifference by official agencies to the existence of these services. Medical care providers not "registered" do not officially exist.

Despite this, there probably is a corps of entrepreneurs, medicine men, and partially trained health workers throughout the country in every village helping people cope with their illnesses. The full extent and nature of this care is not known, but it is reflected in anecdotal accounts of visitors and in local literature, and no doubt much information on it is buried in the medical records of patients who seek government attention as a last resort.[1]

X. ISSUES AND PRELIMINARY RECOMMENDATIONS

A. Distribution of Facilities and Personnel

Both the distribution and types of medical service units within the country appear in need of review. Although accessibility has been provided by the network of roads and other communication

1. A Sierra Leonean economist, Dr. Tamba Alpha-Kpetewama, notes that the traditional training course for witch doctors, which very few boys are now willing to undergo, was five to seven years. He thinks that nowadays only about fifty percent of the provincial population rely mainly on witch doctors for their medical care. Alpha-Kpetewama, The Economic Growth and Development of Sierra Leone (unpublished Ph.D. dissertation, New York University, 1974), pp. 44-45.

channels the distribution of health posts, hospitals centres and other facilities does not always fit the population distribution and density. The small units (health posts and centres) are probably capable of caring for ninety percent of the medical needs of the contigous population if they are modified. But district hospitals and other rural facilities accounted for only thirty-three percent of recurrent expenditures in 1974/75. (According to the 1968 household survey, the rural population spends about five percent of its income on health compared with 1.8% spent by the Freetown urban people.) Furthermore, twenty-three percent of all chiefdoms lack medical facilities and an unknown number of dispensaries and treatment centres are neglected. The urban-rural imbalance is further illustrated by the fact that there are thirty times as many medical officers per person in the in the Western Area (Freetown and environs) as in the Provinces, eight times as many hosptial beds, and about fifty percent more health centers. Moreover the Western area (since it has more hospitals) absorbed about sixty-five percent of all medical supplies (or on a per capita basis, nineteen times more than the rural areas).

B. Repair versus Elimination of Facilities

Closely related to the question of distribution is whether certain facilities should be kept at all. Most fixed health facilities in Sierra Leone such as hospitals probably should have been amortized twenty years ago (the major hospitals are over fifty years old) and should have been replaced according to reasonable

business standards. The recurring cost of maintaining, repairing, and overhauling obsolete or unusable facilities and equipment probably exceeds replacement cost over a relatively brief period. Indeed, many medical units are beyond rehabilitation since there is no means of supplying them with basic utilities or services from funds available to the Health Ministry (see Appendix A ). Moreover the need for extensive inpatient medical facilities is now almost universally regarded as wasteful and irrelevant in most low-income countries except for exceptional needs (high accident rates, cancer and surgically correctable deformities).

C. Logistics

The central medical store depot in Freetown clearly cannot serve the logistics needs of the nation without decentralization. A distribution point in each province would be a start in modernizing this now outmoded method of distributing supplies to health units. A directly related solution to the everpresent problem of drug shortage is the elimination of all outmoded and antiquated remedies and medicines (especially fluids) that the Ministry continues to compound and supply. No more than a dozen easily stored dry medicines in pill, capsule, or ampule form would meet the curative needs of ninety percent of the population. Central purchasing, distribution, and storage could be vastly simpler, and prices could be low enough to serve many more people who now must often purchase these medicines themselves from local sources.

D. Manpower and Training

1. Paramedics

A plan to provide a Health Science Institute in Bo, an urban center some distance from Freetown, to train several categories of non-degree health workers has been proposed as an alternate to a University Health center and an immediate alternative to a medical school. This scheme may work if applicants can be recruited with functional literacy and numeracy; if they are selected by the community where they will serve; and if they are given appropriate recognition, supervision, continuing education, supplies, and other rewards to provide both the psychic and real income that will yield job satisfaction and will keep them in their village or community.

2. Medical Training in Liberia

In the meantime another alternative to a medical school would be the upgrading and support of the existing medical school in the adjacent country (Liberia) through organizations such as the Mano River Union, WHO or through requests to external donors. The current number of qualified candidates for medical degrees from either country alone cannot justify the enormous costs of a separate medical school for each; at least twenty-five graduates a year are required; currently each country can only supply about five candidates.

3. Two-Year Medical Training

Another approach to the dilemma of establishing an expensive medical school is to consider the fact that a medical school is at least two different and distinct institutions. The basic science

school (the prerequisite "scientific" part of medicine) is formal education of the kind offered in almost all countries for the first two years in classroom and laboratory. The "art" of medicine is learned in the home, clinic and at the bedside. Both are needed and there is no substitute for either. Nor is there a substitute for the precept or example of good medical care practice. It is worth considering a program to give Sierra Leonean medical students two years of high quality instruction at home, which is much less expensive than the clinically-oriented last two years, and send them to teaching hospitals abroad to complete their studies. This system has had many successful precedents in other countries (including the USA) and has regained some popularity recently.

E. The Continuing Need to Support Urban Curative Facilities

Much has been written regarding the advantages of emphasizing preventive care over the more costly and limited curative service usually promoted and supported by the medical establishment in all countries. The wisdom of devoting most health efforts and funds to preventive services in developing countries is now almost undisputed and has become part of conventional development thinking. An emphasis on the rural sector is now equally popular. But to ignore the role of the nuclear city is a mistake when considering total health system development plans. Caring for the immediate medical needs of productive urban members of society (whether they are economic producers or child-caretakers) cannot be postponed. Health sector Leadership, moreover, will come from

the modern (urban) areas. Medical care facilities in the cities will continue to be supported, so donors and host country planners cannot escape the painful choice of deciding how to allocate scarce resources between the bulk of the rural population (who cannot make optimal use of already available facilities) and the expensive urban treatment centres within the city. For example the fifty-year old medical center in Freetown needs help of all sorts: financial, management, personnel, supplies, and equipment. It cannot be ignored simply because it has become unfashionable to think in "curative" terms among development planners.

F. Some Summary Recommendations

1. A Series of Major Disease Campaigns

Improved education and sanitation levels, safe water and food, and decent housing will promote health far better than drugs or doctors. Nevertheless, there are about six major diseases which claim most lives prematurely in Sierra Leone and most of Africa: malaria, contagious diseases, gastroenterites, respiratory infection, malnutrition, and parasites. A combination of environmental and preventive medical measures could virtually eliminate most of these diseases. Such a co-ordinated system of campaigns could usefully be analyzed and costed by a donor agency.

2. Self-Help Projects

The opportunities for true locally-inspired and motivated self-help projects should be fully explored, starting with the encouragement of diversity in the category of health care providers

and the manner and character of how fees are charged and collected. Voluntary agencies, private entrepreneurs and public servants all have parts to play in serving the needs of the population. Many of the maintenance, upkeep, repair and local supply needs could be accomplished through local effort. There seems to be too little personal or community pride in current government institutions, with too little apparent expression of "belonging" on the part of the community or sharing of responsibility by the beneficiaries of services. Nor is there likely to be much overt faith in the efficacy or reliability of an institution that only occasionally fulfills the promise of healing or providing the comfort of certain knowledge about causes of illness. Although the current MOH staff are dedicated and working remarkably well under vexing conditions, the present health system is not likely to change much without a thoroughgoing renovation.

3. Training

Vacant posts fill the MOH's roster, ranging from Provincial Health Officer to Health Post Assistant with almost no prospect of being filled in the near future. Apparently little or no thought is given to using so-called indigenous health workers or the private providers of health care. Nursing training in Sierra Leone, both State Registered Nurse (S.R.N.) and the lower level State Enrolled Nurse (S.E.N.), cannot meet the existing institutional staff needs of the country. A re-orientation of traditional hospital-based nursing education toward more supervision and

teaching, and away from bedside duty, might eventually help fill manpower needs for the rural health posts. The five year plan for health calls for a health post for every 5000 persons. This long-term goal could be accelerated to a medium-term goal if the training were started promptly and adequate material support guaranteed for recurring needs. Clearly much of the official program should be postponed and a moratorium declared on new construction until the existing facilities are made effective by adequate staff training and material support.

4. Realignment of Facilities and Personnel

The GOSL five year plan also calls for one health unit per chiefdom, requiring the addition of twenty-four new centers and upgrading of eleven existing units. Realigning existing personnel and facilities could accomplish this objective without large additional capital funds. Furthermore since the national road network permits transport of most patients to Freetown for definitive treatment, any facilities larger than health centre should probably be eliminated.

Existing institutions cannot effectively function without basic utilities, services and supplies. And the health posts and centers should be upgraded to provide primary medical and preventive services.

5. Information

Last, but certainly not least, there is an urgent need to review and overhaul the medical records and health statistics of the Ministry at every level.

## XI. Project Areas for Future AID Investigation

### A. Information Gathering and Analysis within The Ministry

1. There appears to be almost no information available on the status and functional capacity of existing medical care fixed facilities. Repairing, modernizing, resupplying and upgrading current medical units may be the most effective means of revitalizing dormant or non-functioning facilities, and these means should be investigated.

Specific Project: Audit/survey/analysis of existing government facilities to determine immediate equipment requirements needed to become fully functioning.

2. Health data gathering is a critical gap in development plans. But even prior to that, there is need to determine the absolute minimal data required to do effective planning. What kind and how much data are needed? From what sources? By whom? How often? How will they be used? At present the Central Statistics Office (CSO) of the Ministry of Planning and Economic Development and the Medical Statistics Unit (MSU) of the Ministry of Health work independently to gather and process data. The MSU gathers and tabulates institutional medical diagnostic and service data and some vital rates and causes of death simply because they are most readily available; the elements of a collection system already exist. Much of the information gathered however is seriously outmoded, of questionable accuracy and usefulness, often redundant or irrelevant, and not suitable for modern data processing and analysis. There is a complete data abyss once one leaves the major medical care

in-patient facilities, yet this is where most events take place of greatest concern to the Ministry.

Specific Project: An analysis of the minimal data required to operate, manage, and plan an effective government health service.

3. Manpower and Training Data Needs

Estimates of potential trainees for various categories of health worker, job descriptions and task analyses of lower level workers, staffing and distribution patterns, civil service and other regulatory requirements coupled to consummer and disease pattern demands are data-based studies which require specialized help.

Specific Project: A study of the above problems to streamline current manpower conditions and allocation of personnel according to a set of priorities designed to meet health program development goals.

B. Manpower Development

Once the data above have been collected, plans can be made to organize the training facilities for the categorical health workers. Work has been started to develop the training center for lower level workers in Bo along the lines of two existing such centers in Yaounde and Ife. The lower-level health worker training programs in the Cameroons and Nigeria are African models of such training institutions, but there are others that might be visited and studied in Panama, Venezuela, Yugoslavia, India, Cuba, China, and Pafua-New Guinea, for example before deciding upon a definitive solution

to the health manpower problem in Sierra Leone.

Specific Projects:

I. Travel-study of lower-level health worker training institutions by the Chief Medical Officer and her principal training officer.

II. Loan or grant assistance to the Bo institute for construction materials and/or training equipment and supplies.

C. Nutrition

National food-balance reports are usually prepared in Rome by FAO from published accounts of food production and from estimates of consumption and food needs for various age-sex segments of the population. These calculations are exceedingly gross and are published too late and are too crude to be useful for specific program planning. "Nutrition status" overall is measured perhaps most meaningfully by examining the growth of young children, since their growth is the most sensitive indicator of general health/nutrition conditions of a community. There is no immediate reliable way of gathering this information short of the expensive process of going into people's home directly to find out who eats how much of what food and to measure and weigh children.

Specific Project(s):

a. National sample household dietary survey.

b. National sample nutrition status survey.

A.I.D. has regional funds that can support these projects promptly.

D. Alternatives to Government Medical Care

About half of current medical care is supplied by non-government entities, which try to fill gaps in rural areas. There are several medical and nutrition projects shared jointly by government and private, voluntary or missionary sponsors, and there are self-help projects partly supported by the funds or the labor of the recipients of medical services. These cooperative and multilateral ventures deserve further study and possible expansion. The role of the private sector, harnessing the potential vigor of enlightened self-interest, has not been adequately exploited. The private providers of services in Sierra Leone could become effective contributors to the medical services pool with sufficient attention in terms of training, recognition, and possible subsidy or other support.

The recipients of services also could contribute to their own medical care by utilizing existing services more efficiently through public information and teaching campaigns (so-called "health education"), and by taking personal responsibility for local health-care units and their personnel.

There are examples of this principal which do work successfully in low-income countries and could be applied on a demonstration basis with limited means by coupling to ongoing or anticipated projects in other fields such as agriculture. Such projects may have opportunities to use unutilized or underutilized labor, locally available materials, or other low-cost support elements. Even

more important is the pride and self-esteem that, it turn, reduces dependency on benificence regardless of its motives or source.

Specific Projects

I. Delegation of authority and responsibility under an integrated rural development project for local medical care to local administrative or ruling units (clan or tribal chiefs). Provision of financial and advisory support by granting building and construction support, subsidies, or outright grants for salaries and supplies, training and supervision for personnel, and the freedom to set fees for services and commodities such as medicines that could be used to generate income. (The income could, in turn, be fed back into the system to make it self-supporting.)

E. Population and Family Planning

1. A Comment on the Potential Demand for Family Planning

There appear to be substantial numbers of Sierra Leonean women ready in the immediate future to accept family planning if supplies and information are made more readily available. Dow, in the study cited above, reported that fifty-three percent of the literate women and eighteen percent of the illiterate women in his sample survey (probably representative of the nation's total population) approved of family planning, whereas the percentages actually using birth control were only 17.6 and 4.1, respectively (pp. 163-64). The percentage of women wanting to know more about family planning were 74.9 for the literate and 59.8 for the illiterate. There seems little doubt, then, that Sierra Leone had a large untapped potential demand for family planning when

the survey was taken six years ago, and there is likewise little doubt that much of this potential demand remains untapped today. For example, one should not be surprised if about sixteen percent of the illiterate women (i.e., the difference between eighteen and four percent) are "reachable" simply by making contraceptives and information readily available. These figures are roughly consistent with experiences in other low-income countries. The "easy acceptors" are the obvious target groups for programs in the first few years. But experience in other countries also suggests that when the supply of easy acceptors has been exhausted, projects based mainly upon contraceptive supplies and information will begin to look markedly less successful.

2. Specific Population Project Areas

Broad project areas are discussed here under seven headings:

(a) demographic data

(b) socio-economic research

(c) public opinion formation

(d) mass education

(e) integrated M.C.H. Services

(f) distribution of contraceptives

(g) incentives

It should be noted however that actual project designs (which are not considered here) might combine elements from two or more of these areas. Team members have discussed most of these areas with GOSL staff, private Sierra Leonean citizens, and/or other donors' personnel. But only for a few areas has the GOSL approved

or even begun to develop specific project designs.

a. Demographic Data. The lack of good data and statistics is a primary constraint upon Sierra Leone's ability to plan development programs in the family planning area as well as in other sectors like education and agriculture. Projections of population growth trends are difficult to make in Sierra Leone because there have been no nationwide surveys of birth and death rates. Basic demographic data such as these are needed (especially with regional breakdowns) not only in connection with family planning programs, but also to improve the government resource allocation process for facilities in social service sectors like health and education. The payoffs to demographic data are often long-run and indirect, so that operationally-oriented host governments and aid donors have often tended to overlook the importance of data. The GOSL's five-year Plan does not explicitly emphasize demographic data collection, although the general importance of statistics is recognized in several sectoral discussions. AID has developed considerable worldwide expertise in demographic data, especially in cooperation with the U.S. Census Bureau and various multilateral donors. This area could be a useful one for AID participation in Sierra Leone. Among the important issues that should be faced in assessing the desirability of AID participation is the integration of demographic survey data activities in Sierra Leone with the GOSL's current or prospective activities in collecting survey data on income, agricultural production, and health.

An adequate assessment of these matters for AID would probably require a six-to-ten week TDY by an expert social scientist or survey research statistician.

b. Socio-Economic Research. Reserach on the socio-economic determinants of fertility in Sierra Leone could become increasingly needed after biomedical and educational project activities succeed in skimming off the "easy acceptors" of family planning. However, such research probably cannot make much progress in Sierra Leone until more and better demographic data are available. In the immediate future, AID should probably not give high priority to large-scale research support in Sierra Leone, concentrating instead on a program to increase the research usefulness and availability of demographic and related socio-economic data.

c. Public Opinion Formation. The GOSL has formally announced support for activities in this area by virtue of its call in the five-year plan for a National Population Council. If it should translate the idea into something concrete, as for example by appointing Council members or establishing a Secretariat, the prospects for a small AID project in this area are good, perhaps directly supporting the Council.

d. Mass Education. The GOSL has not stated any priority for mass media or other widespread information campaigns in the family planning area. Nonetheless, projects here would probably be acceptable to the GOSL if they are fully in line with its policy on the integration of family planning into health activities. Such

projects could be attractive to AID in so far as they probably require less sophisticated technical designs than demographic or medical services projects. Against this benefit one must weigh the likelihood that such activities may reach limit of "easy acceptors" within a few years and thereafter may have a very low payoff.

e. Integrated MCH Services. Family Planning activities here would probably find the greatest acceptability on part of the GOSL, so long as the foreign donor is truly sympathetic with the integrated approach for health and family planning. AID must be prepared to accept in this instance that family planning funds will to some extent be spent directly on MCH activities rather than always strictly upon contraceptives and contraceptive services that are merely distributed at MCH clinics. This approach has frequently not been well received in the past by AID, based upon the early belief that the distribution of contraceptives and birth control information was the priority means to reduce birth rates in most countries. However, since this strict contraceptive approach is not ofetn not well accepted in host countries such as Sierra Leone, and since in any event child mortality is often an important determinant of the birth rate, an integrated MCH and family planning approach deserves priority AID attention in Sierra Leone. Projects for donor assistance here can take many forms - training abroad for doctors, nurses, and para-professionals; nutrition supplements and nutrition

information; basic health information and education, and supplies of medicines and contraceptives - to name a few. Many projects in this area would be suitable for small scale operations and/or for implementation by private voluntary organization such as CARE or Catholic Relief Services.

f. Distribution of Contraceptives. Activities of this type can obviously be included in several of the project areas mentioned above. GOSL officials have not as yet either formally or informally expressed interest in separate projects for contraceptive distribution. On the other hand, in view of the relatively high cost of contraceptives in a low-income country like Sierra Leone, and in view of successful AID experiences with commercial distribution subsidies in several other countries, some type of support to the private market for subsidized contraceptive sales should be considered for an eventual AID supported project. It also might be suitable for PVO implementation.

g. Incentives. This is another area where GOSL officials have not yet expressed interest. However recent encouraging results in several Asian countries with financial incentives (some of them tied to old-age "social security" schemes) suggest African countries might well consider the experimental use of incentives in population programs. The experimental nature of these programs argues, however, that in Sierra Leone they would probably not be ready for AID finance within the next two years. Nonetheless if AID or the Embassy establish greater working relationships with the GOSL on population questions, it might be appropriate to

have a social scientist with experience in incentives activities spend a four-to-six-week TDY in Sierra Leone during calendar 1976 to exchange ideas with GOSL official private family planning leaders, and other donors' staff.

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## APPENDIX A

## SIERRA LEONE DAP - HEALTH SECTOR

## FIELD TRIP REPORT, DEC. 9-10, BY J.P. KEEVE, M.D.

The trip covered eight installations on a 686 kilometer circuit.

I. Hastings Health Post (thirteen miles from Freetown)

Mr. Palmer, the Dispenser is the equivalent of a primary care health worker. He diagnoses common illnesses and provides treatment, advice, and general health supervision. He is supported by preventive service workers who give routine immunization and by sanitary inspectors who take care of environmental problems. He mans three posts in his vicinity on rotation and lives in the area. He has had nursing, pharmacy and on-the-job training and sees approximately 50-60 patients a day, submits monthly reports to the Ministry, requisitions his own medicines quarterly and is occasionally visited by an auditor and Chief Dispenser. About 500 people rely on him for primary health care although they may also be seen by local traditional practitioners who, according to the Ministry, should not be providing care since they are not registered.

Impressions:

1. The dispenser is not fully utilized. With very little additional training he could be doing simple laboratory work and routine immunizations. But he also would need proper equipment.

2. The physical facility is not maintained at all. Repairs and upkeep could be undertaken by the local recipients if provided the materials.

3. Water, electricity, and toilet facilities are lacking.

4. At least half of the pharmacopia is antiquated and should be abandoned to medical history where it belongs. An efficient collection of about one dozen modern medicines in full and continous supply is what is needed in response to the repeated complaint that there are never sufficient quantities of proper drugs on hand.

5. The recordkeeping and reporting system badly needs overhaul. The current information collected is not serving any useful purpose. There is no accounting for drugs, no way to

acertain results of treatment or confirm diagnosis, virtually no supervision or current on-the-job training or anyone with whom to share professional experience.

Conclusion: Fundamentally sound situation, which could be vastly improved with relatively small investment.

II. Waterloo Health Centre (20 miles from Freetown)

| | |
|---|---|
| Senior Dispenser | F.F. Thompson |
| Dispenser | Abayomi Cole |
| Staff Midwife | Mrs. Hannah Thomas |
| Health Inspector | Mr. Sesay |
| M.C.H. Aides | 2 |
| Nursing Aides | 2 |
| Porters | 2 |
| Ambulance Driver | 1 |
| Ambulance Mate | required |
| Watchman | 3 |
| Labourers | 2 |
| Night Soil Man | 1 |

This facility is virtually a district health centre except there are no supervising physicians or nurses. It serves about 700 people. There are facilities for obstetrics and limited in-patient care, housing quarters for senior staff, storage rooms, treatment rooms, labor rooms, offices for the sanitary (Health) inspector, all in various stages of repair and upkeep. The roof in one section is broken by a fallen tree and the patients' toilet is in unmentionable condition. The place in general is adequate in size and layout but is not fully utilized in terms of patient load. The senior dispenser is a strikingly avuncular, authoritative, kindly, almost archtypal exemplar family practitioner whose patience and warmth inspires confidence immediately. The staff midwife too seemed extremely competent and experienced. The patients load was about 50-60 per day, with about 4-5 deliveries a week. The health inspector was away looking for unstable trees about to endanger homes, water supplies in need of connection, and malaria breeding spots. There is an impressive staff. The ambulance seemed to be in chromic ill health.

Impression: An underutilized facility competing with local practitioners and handicapped by shortage of drugs and equipment.

Recommendation: Cut medicine list to essentials; supply limited laboratory and diagnostic equipment. Use the facility for teaching purposes (nurses, medical students, physicians assistants, etc.)

## III. Njala Health Centre

The Centre was started as a health clinic for the University and gradually started caring for the population in the area. Dr. D.S. Sama is second from the Ministry to work there and is assisted by another very able physician, Dr. T. Crowley. Dr. Sama is happy to work there because it is his hometown. He also receives incentive pay for working in the provinces. This facility is really a small hospital doing mostly out-patient work very ably and competently, with a combination of government and mission support plus a contribution from patient fees. It too should be used for teaching. The staff is excellent; and the facilities, upkeep, maintenance and treatment are all good. A full description is provided below, along with a rank-order list of important diseases in the area.

Impression: Excellent, well used, highly regarded local semi-private health facility which should be supported. Urgent need for drugs and inuminization vaccines on a reliable basis. A good nucleus of a teaching facility.

| CASES | NOVEMBER, 1970 | NOVEMBER, 1975 |
|---|---|---|
| General Patients | 1589 | 2420 |
| Under Fives Clinic | | |
| New | 108 | 107 |
| Return | 887 | 2260 |
| Total | 995 | 2367 |
| Maternity Patients | | |
| New | 28 | 68 |
| Return | 81 | 183 |
| Total | 109 | 231 |
| Deliveries | 10 | 10 |

## NJALA UNIVERSITY COLLEGE HEALTH CENTRE*

### General Discription

The Health Centre is a non-academic Department of the College. It provides a service for staff, students and employees of the College together with their families and dependants. In addition, many patients come to the Centre from the surronding area.

### Staff

Two full-time Medical Officers, two Nursing Sisters, two Druggists, three Registered Nurse/Midwives, three Registered Nurses, three Enrolled Nurses, two Laboratory Assistants, two Clerical workers, six Ward Attendants/Porters, one Ambulance Driver.

### Facilities and Special Clinics

Waiting Room, two consulting rooms, one Laboratory, Dispensary with treatment rooms, maternity section, under-five clinic, day ward, operating theatre for minor surgery, stores offices, ambulance.

Daily out patient clinic, weekly under-fives clinic with, in addition, special service daily for sick children, weekly ante-natal clinic, delivery care for normal cases, and special arrangements for daily supervision of patients delivered in nearby villages. We deal with a large number of accident cases during the course of the year.

### Referrals

Patients are referred to Bo or Freetown for investigations and treatment beyond the scope of the Health Centre.

### Inter Departmental Co-operation

The Health Centre and the Home Economics Department work co-operatively in regard to the Under Five Clinic, the Ante-natal Clinic and the referral of patients in the villages to the Health Centre for treatment.

The Physical Plant Department of the College is especially helpful in servicing and maintaining the Centre and its ambulance.

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* Verbatim description written by NJALA staff.

## LIST IN THE ORDER OF IMPORTANCE OF THE DISEASES

## COMMON AMONG OUR PEOPLE

| DISEASE | CASES/YEAR | MEDICINE REQUIRED | QUANTITY |
|---|---|---|---|
| Respiratory Diseases | 1,554 | Antibiotics, sulfa drugs, similar | As much as can given |
| Malaria | 2,186 | Antimalarials (Chloroquine) | 50,000 chloroquine tabs |
| Onchocerciasis | 530 | Inj. Suramin, tabs diethylcarbamazine. ([illegible]) | Tabs Dec. 30,000 inj. Suramin [illegible],000 |
| Diarrhoea & Vomiting | 626 | Antibiotics, Antiemetics Lomotil | As much as is available |
| Ulcers and Other septic skin conditions | 1,400 | Dressings, ointments, vitamins | Large |
| Malnutrition | 430 | Vitamin/mineral preparations | Medium |
| Helminth infection | 4,000 | Anthelminthics | Large |
| Hypertension | 111 | Antihypertensives | medium |
| Anaemia of pregancy | 490 | Iron and folic acid tabs | Large |
| Accidents poisoning & violence | 60 | Dressings and analgesics | Large |

## IV. Bo Provincial Hospital

This facility is over 40 years old, built of mud brick, with a single spread-out pavillion. It is a nearly senile hospital trying to be the apex of a referral pyramid for the Southern Province. It also is said to be the best of the provincial hospitals, with a dedicated but severely limited performance due to inoperative or lacking facilities, equipment, and staff. To catalog all the missing, broken, decrepit equipment and facilities would require a dozen or more pages starting with forms (prescription blanks) through the laboratories, operating theatres, wards and housekeeping plant, water, electricity, machinery, walls, and floors. It tries to be a referral point but does not approach the resources in Freetown.

The new Institute for Health Training is planned for the large government reservation enclosing the Bo complex. Although

200-300 outpatients are seen daily, I'm not sure this is a good teaching facility or the proper location for an Institute to train various categories of health workers. Staffing and primary service data are supplied below:

A. Bed Capacity: 144
B. Daily outpatient load: 100-200
C. Staff: (numbers in parentheses are allotments)

1. physician specialist (expatriate) - 1
2. surgeon specialist - 1
3. physician - 1
4. general practitioners - (4)
5. dentist - (1)
6. physio-therapist - 1
7. pathologist - (1)
8. radiographer - 1
9. laboratory superintendent - 1
10. matron - 1
11. nursing sisters - 2
12. ward sisters - 13
13. staff midwife - 1
14. trained nurses SRN, SEN - 11
15. Nursing aides - 22
16. MCH associates - 11

A separate division of the Ministry is responsible for communicable disease control and is located off hospital grounds. There is a chronic shortage of vaccines, drugs and supplies. Utility services (water, electricity and telephones) are uncertain, as are petrol for ambulances and lorries to fetch supplies from Freetown.

## V. Yele Health Centre

This facility is similar in size to the Hastings Health Post and is staffed by a dispenser, an MCH aide, and a porter. It sees about 36 patients a day and does about 7 deliveries a month. The same complaints above: chronic shortage of supplies and inadequate space, services, and maintenance. The atmosphere was busy and the facility is apparently well-attended by local residents. Again, basic utilities were lacking.

## VI. Magburaka Provincial Hospital

This central provincial hospital with 153 beds sees about 100 outpatients daily. It has one physician, one surgeon, and the following staff: 1 matron (E.C.E. Front); 1 nursing sister; 4 ward sisters; 1 staff midwife; 8 S.E.N. nurses; 1 trained I.D. nurse; 15 nursing aides; and 1 midwife.

This hospital literally has no water and only occasional electricity or telephone service. None of the refrigerators work, nor does the kitchen or laundry. Drugs and other supplies are chronically in short supply or completely lacking. There is a team of 5 Russians doing surgery. That the hospital is functioning at all is attribute to the dedication of the staff and the astonishing faith of the patients who do appear there for treatment.

VII. Makeni District Hospital

Bed capacity: 72
OPD patient load daily: 100
Deliveries: 50 - 70 a month
Staff:

2 GP physicians (one expatriate)
1 Nursing sister
3 Ward sisters
1 staff midwife (also MCH)
11 Nursing aides
12 MCH aides

A class for ten traditional midwives was being conducted in the "under-fives" clinic off hospital grounds. Some family planning instruction was being offered unofficially and informally. Supplies of all sorts, fuel, water, and electricity were again sporadic or lacking. A 350 bed hospital to be erected in the nearby town of Musuba was mentioned. This seemed to be the desire of one of the local politicians and had not progressed very far.

TABLE 1 – THE ALLOCATION OF PUBLIC EXPENDITURE TO THE HEALTH SECTOR 1963/64 – 1971/72

| Fiscal Year | Current Health Expenditure ( Le 000 ) | As % of Total Current Public Expenditure | Capital Health Expenditure ( Le 000 ) | As % of Total Public Capital Expenditure | Total Health Expenditure ( Le 000 ) | As % of Total Public Expenditure |
|---|---|---|---|---|---|---|
| 1963/64 | 2470 | 8.2 | 51 | 1.9 | 2521 | 15.4 |
| 1964/65 | 2782 | 8.5 | 74 | 0.9 | 2856 | 14.2 |
| 1965/66 | 3183 | 8.4 | 90 | 0.7 | 3273 | 15.5 |
| 1966/67 | 2532 | 8.0 | 74 | 0.8 | 2606 | 15.7 |
| 1967/68 | 2470 | 7.1 | 107 | 1.2 | 2577 | 17.1 |
| 1968/69 | 2681 | 8.0 | 106 | 0.8 | 2788 | 16.9 |
| 1969/70 | 3081 | 8.3 | 176 | 0.9 | 3257 | 17.4 |
| 1970/71 | 3971 | 9.1 | 200 1/ | 1.5 | 4075 | 13.1 |
| 1971/72 | 4181 | 8.7 | -43 | – | 4138 | 13.9 |

Source: National Accounts of Sierra Leone 1963/64 to 1971/72, C.S.O. June, 1973 Table 30.

1/ Financial Report 1970/71

TABLE II

A SUMMARY STATISTICS OF MEDICAL ESTABLISHMENTS
NUMBER OF MEDICAL UNITS
BY TYPE OWNERSHIP AND BY DISTRICTS
SIERRA LEONE 1st JANUARY 1973.

| DISTRICT | HOSPITALS | | | | | HEALTH CENTRES | | | | | M C H Centres | | Clinics and DISPENSARIES | | | | | P.C. | MATERNITY CENTRES | | | | | PHARM b. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | G. | Miss. | I | P | Total | G | Miss. | I. | P. | Govt. | P. | Total | G | Miss | I. | P. | Govt. Only | Total | G. | Miss. | I | P. | P. |
| SIERRA LEONE | 42 | 25 | 6 | 4 | 7 | 36 | 29 | 5 | - | 2 | 11 | 1 | 131' | 24 | 22 | 3 | 82 | 63 | 42 | 29 | 3 | - | 10 | 15 |
| WESTERN AREA | 12 | 9 | 2 | - | 3 | 5 | 4 | - | - | 1 | 1 | - | 56 | 10 | - | 3 | 43 | - | 9 | - | - | - | 9 | 12 |
| SOUTHERN P. | 7 | 5 | 2 | - | 2 | 13 | 10 | 2 | - | 1 | 3 | 1// | 17 | 5 | 1 | - | 11 | 16 | - | - | - | - | - | - |
| BO | 2 | 1 | 1 | - | - | 3 | 2 | 1 | - | - | 1 | - | 9 | 1 | - | - | 8 | 4 | - | - | - | - | - | - |
| BONTHE | 2 | 1 | 1 | - | - | 2 | 2 | - | - | - | - | - | 3 | 1 | 1 | - | 1 | 2 | - | - | - | - | - | - |
| MOYAMBA | 2 | 2 | - | - | - | 6 | 4 | 1 | - | 1 | 2 | 1// | 3 | 2 | - | - | 1 | 4 | - | - | - | - | - | - |
| PUJEHUN | 1 | 1 | - | - | - | 2 | 2 | - | - | - | - | - | 2 | 1 | - | - | 1 | 6 | - | - | - | - | - | - |
| EASTERN PROV | 11 | 4 | 1 | 2 | 4 | 4 | 3 | 1 | - | - | 3 | - | 25 | 3 | 4 | - | 19 | 32 | 33 | 29 | 3 | - | 1 | 3 |
| KAILAHUN | 3 | 1 | 1 | - | 1 | 2 | 2 | - | - | - | 1* | - | 5 | 2 | 2 | - | 1 | 15 | 20 | 10 | 2 | - | - | - |
| KENEMA | 4 | 2 | - | 1 | 1 | - | - | - | - | - | 1 | - | 10 | 1 | 2 | - | 7 | 12 | 10 | 9 | 1 | - | - | 2 |
| KONO | 4 | 1 | - | 1 | 2 | 2 | 1 | 1 | - | - | 1 | - | 11 | - | - | - | 11 | 6 | 3 | 2 | - | - | 1 | 1 |
| NORTHERN P. | 12 | 7 | 3 | 2 | - | 14 | 12 | 2 | - | - | 4 | - | 32 | 6 | 17 | - | 9 | 14 | - | - | - | - | - | 1 |
| BOMBALI | 3 | 1 | 2 | - | - | 1 | - | 1 | - | - | 1 | - | 12 | 3 | 6 | - | 3 | 1 | - | - | - | - | - | + |
| KAMDIA | 1 | 1 | - | - | - | 2 | 2 | - | - | - | - | - | 5 | 2 | 2 | - | 1 | 1 | - | - | - | - | - | - |
| KOINADUGU | 1 | 1 | - | - | - | 3 | 3 | - | - | - | 1 | - | 4 | 1 | 3 | - | - | 5 | - | - | - | - | - | - |
| FORT LOKO | 5 | 2 | 1 | 2 | - | 2 | 2 | - | - | - | 1 | - | 3 | - | 2 | - | 1 | 5 | - | - | - | - | - | - |
| TONKOLILI | 2 | 2 | - | - | - | 6 | 5 | 1 | - | - | 1 | - | 8 | - | 4 | - | 4 | 2 | - | - | - | - | - | - |

// At Njala University College.
a/ including Clinic Town Health Unit which does not have a Maternity wing
* To be officially opened later this year.
b/ PHARM = Pharmaceutical Businessen.

Source: GOSL, Ministry of Health, Medical Statistics Unit,
Series A, No. 5, Directory of Medical Services, 1973

TABLE III

NUMBER OF MEDICAL UNITS BY
TYPE & OWNERSHIP
SIERRA LEONE 1966-1973
(as at 1st January Each year)

| TYPE | YEAR / OWNERSHIP | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 |
|---|---|---|---|---|---|---|---|---|---|
| | TOTAL | 35 | 36 | 37 | 38 | 38 | 40 | 40 | 42 |
| HOSPITALS | G | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 |
| | Miss. | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 6 |
| | I | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 |
| | P | 2 | 3 | 3 | 4 | 5 | 6 | 6 | 7 |
| | TOTAL | 29 | 31 | 31 | 36 | 38 | 34 | 37 | 36 |
| HEALTH CENTRES | G | 25 | 27 | 27 | 27 | 28 | 29 | 31 | 29 |
| | Miss | 2 | 2 | 2 | 3 | 4 | 3 | 4 | 5 |
| | I | - | - | - | - | - | - | - | - |
| | P | 2 | 2 | 2 | 4 | 4 | 2 | 2 | 2 |
| | TOTAL | 28 | 29 | 30 | 33 | 39 | 54 | 50 | 131 |
| DISPENSARIES & CLINICS | G | 16 | 7 | 18 | 20 | 22 | 24 | 23 | 23 |
| | Miss | 10 | 10 | 10 | 11 | 15 | 16 | 23 | 23 |
| | I | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| | P* | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 82* |
| TREATMENT CENTRES | G | 40 | 43 | 44 | 46 | 56 | 57 | 62 | 63 |
| MCH CLINICS | Total | 1 | 2 | 4 | 6 | 7 | 8 | 9 | 11 |
| | G | 1 | 2 | 4 | 6 | 7 | 8 | 9 | 10 |
| | P | - | - | - | - | - | - | - | 1 |
| MATERNITY HOMES | Total | 3 | 3 | 14 | 14 | 16 | 16 | 17 | 44 |
| | G | ... | ... | ... | ... | ... | ... | ... | 29# |
| | Miss | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | P | ... | ... | 11 | 11 | 13 | 13 | 14 | 12 |
| Pharmaceutical Shops | | ... | ... | ... | ... | ... | ... | ... | 15 |

* Including 15 Private Doctors' Clinics
65 Dispensers' Clinics (with Private Pharmacies)

\# Native Administrative Maternity Homes in the Eastern Province only. Data for these units in the other provinces are not available.

... Data not available.

Source: GOSL, Ministry of Health, Medical Statistics Unit, Series A, No. 5, Directory of Medical Services, 1973

TABLE IV

Certified Deaths in the Western Area 1969 - 71

| | | |
|---|---|---|
| Infective & parasitic (000 - 136) | 2037 | 34 % |
| Respiratory (450 - 519) | 1026 | 17 % |
| Nutritionally - related (267 - 285) | 352 | 6 % |
| Disgestive system (532 - 596) | 308 | 5 % |
| Sub - Total (A) - poverty - related disease groups | 3723 | 62 % |
| Heart (391 - 429) | 324 | 5 % |
| Neo-plasms (141 - 202) | 185 | 3 % |
| Accidents | 435 | 7 % |
| Sub - Total (B) - non poverty - related disease groups | 944 | 15 % |
| Total A + B | 4667 | 77 % |
| Total certified deaths 6068 | | 100 % |

Source: compiled from statistics published by Medical Statistics Unit, Ministry of Health.

TABLE V
PER CAPITA HEALTH EXPENDITURES, FY1971/72

| Region | Amount (Le.) | Per capita Expenditure 1/ |
|---|---|---|
| Sierra Leone | 1,050,501 | 0.405 |
| Western Area | 653,315 | 3.187 |
| All Provinces | 396,986 | 0.166 |
| Southern Province | 125,656 | 0.194 |
| Bo | 69,220 | 0.278 |
| Bonthe | 22,166 | 0.231 |
| Moyamba | 18,683 | 0.092 |
| Pujehun | 15,587 | 0.153 |
| Eastern Province | 111,009 | 0.169 |
| Kailahun | 33,484 | 0.185 |
| Kenema | 51,373 | 0.187 |
| Kono | 26,152 | 0.129 |
| Northern Province | 160,321 | 0.148 |
| Bombali | 28,508 | 0.119 |
| Kambia | 19,995 | 0.120 |
| Koinadugu | 25,415 | 0.164 |
| Port Loko | 37,776 | 0.127 |
| Tonkolili | 48,627 | 0.219 |

1/ Population estimates used were for Mid 1973

Source: Medical Stores, Ministry of Health.

TABLE VI- GEOGRAPHICAL DISTRIBUTION OF PUBLIC HEALTH RESOURCES - 1973

| | Number of Medical officers 1/ | Number of Hospital Beds 2/ | Number of Health and MCH centres | Number of dispensaries and treatment centres | Population (in 000) | Persons per Medical Officer | Persons per Hospital bed | Persons per Health and MCH centre | Persons per dispensary and treatment center |
|---|---|---|---|---|---|---|---|---|---|
| Western Area | 71 | 700 | 5 | 10 | 205 | 2,887 | 293 | 41,000 | 20,500 |
| All Provinces | 28 | 1,048 | 35 | 76 | 2,386 | 85,214 | 2,277 | 68,171 | 31,395 |
| Southern Province | 12 | 360 | 13 | 21 | 649 | 54,083 | 1,803 | 49,923 | 30,905 |
| Bo | 8 | 175 | 3 | 5 | 249 | 31,125 | 1,423 | 83,000 | 49,800 |
| Bontho | 1 | 40 | 2 | 3 | 96 | 96,000 | 2,400 | 48,000 | 32,000 |
| Moyamba | 2 | 98 | 6 | 6 | 202 | 101,000 | 2,061 | 33,667 | 33,667 |
| Pujehun | 1 | 47 | 2 | 7 | 102 | 102,000 | 2,170 | 51,000 | 14,571 |
| Eastern Province | 7 | 310 | 6 | 35 | 657 | 93,857 | 2,119 | 109,500 | 18,771 |
| Kailahun | 1 | 37 | 3 | 17 | 181 | 181,000 | 4,892 | 60,333 | 10,647 |
| Kenema | 5 | 208 | 1 | 12 | 274 | 54,800 | 1,317 | 274,000 | 22,833 |
| Kono | 1 | 65 | 2 | 6 | 202 | 202,000 | 3,108 | 101,000 | 33,667 |
| Northern Province | 9 | 378 | 16 | 20 | 1,080 | 120,000 | 2,857 | 67,500 | 54,000 |
| Bombali | 2 | 60 | 1 | 4 | 239 | 119,500 | 3,983 | 239,000 | 59,750 |
| Kambia | 1 | 49 | 2 | 3 | 166 | 166,000 | 3,388 | 83,000 | 55,333 |
| Koinadugu | 1 | 53 | 4 | 6 | 155 | 155,000 | 2,924 | 38,750 | 25,833 |
| Port Loko | 2 | 85 | 3 | 5 | 298 | 149,000 | 3,506 | 99,333 | 59,600 |
| Tonkolili | 3 | 131 | 6 | 2 | 222 | 74,000 | 1,695 | 37,000 | 111,000 |
| SIERRA LEONE | 99 | 1,748 | 40 | 86 | 2,591 | 26,172 | 1,482 | 64,775 | 31,395 |

1/ Figures are for December 1974

2/ Excluding 683 beds in leprosy, chest, mental and prison hospitals

Source: Directory of Medical Units, Ministry of Health W.H.O. team, Ministry of Health.

Table VIII Per Capita Health Expenditure 1970/71

| | Total (in Leones) | Per Capita (in Leones) |
|---|---|---|
| Government Recurrent Expenditure | 3,970,582 | 1.534 |
| Government Capital Expenditure | 158,000 | 0.061 |
| Private Health Expenditure 2/ | 2,900,000 | 1.121 |
| Total | 7,028,582 | 2.716 |
| 1.Assumes officials population estimates of | 2,588,000 | |

2.National Accounts June 1973 Table 13.

Table IX – THE GEOGRAPHICAL ALLOCATION OF GOVERNMENT HOSPITAL BEDS IN 1963 and 1973 1/

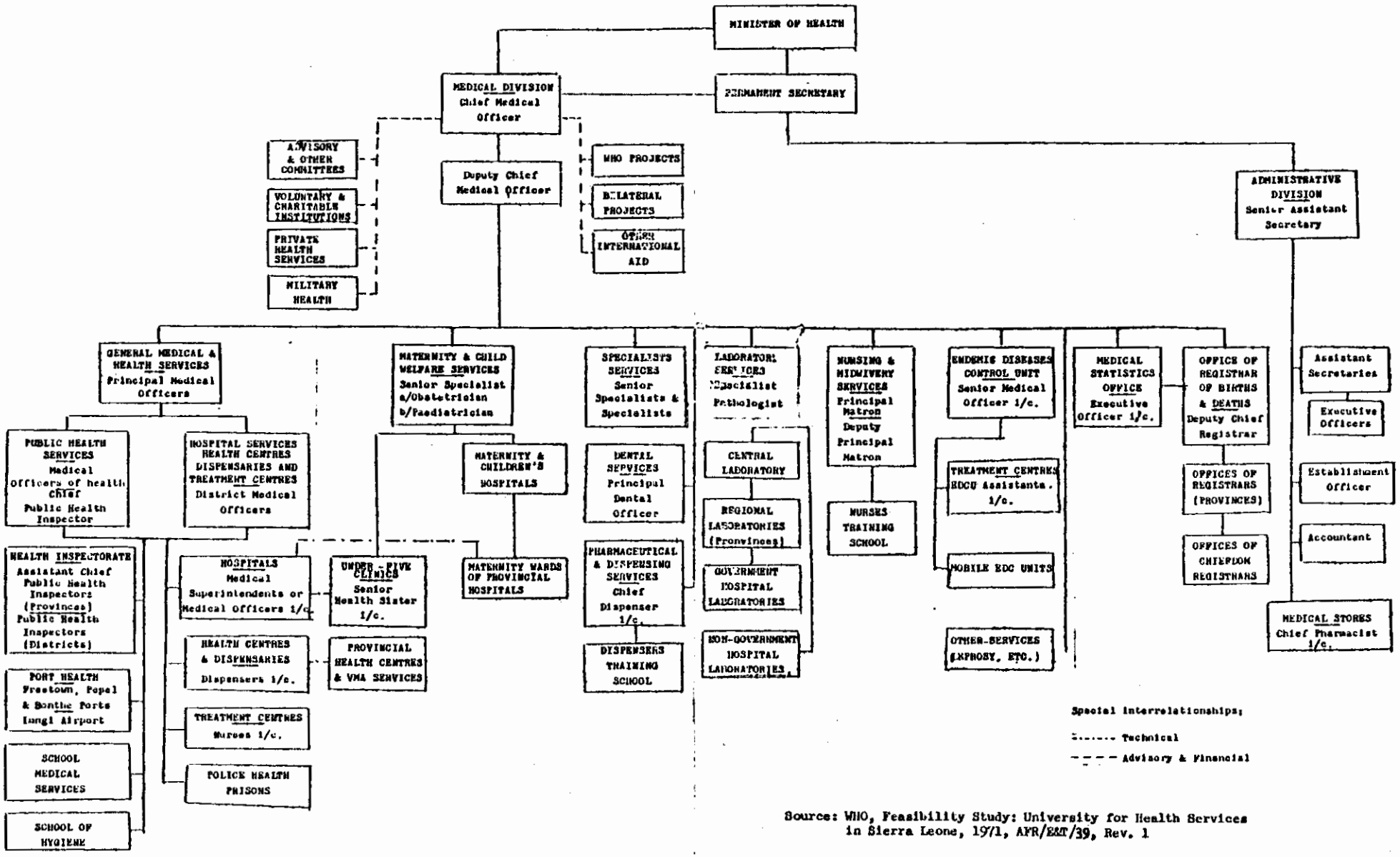
| | 1963 | % | 1973 | % |
|---|---|---|---|---|
| Western Area | 478 | 41 | 700 | 40 |
| Southern Province | 263 | 23 | 360 | 21 |
| Bo | 130 | | 175 | |
| Bonthe | 43 | | 40 | |
| Moyamba | 34 | | 98 | |
| Pujehun | 56 | | 47 | |
| Eastern Province | 159 | 14 | 310 | 17 |
| Kailahun | 40 | | 37 | |
| Kenema | 69 | | 208 | |
| Kono | 50 | | 65 | |
| Northern Province | 259 | 22 | 378 | 22 |
| Bombali | 33 | | 60 | |
| Kambia | 42 | | 49 | |
| Koinadugu | 52 | | 53 | |
| Port Loko | 68 | | 85 | |
| Tonkolili | 64 | | 131 | |
| SIERRA LEONE | 1159 | | 1748 | |

1/ Excluding beds for tuberculosis, leprosy and mental care

Sources: National Health Plan 1965/75, Table XV, XVI.

Directory of Medical Units, 1973.

STRUCTURE OF THE MINISTRY OF HEALTH OF SIERRA LEONE




Source: WHO, Feasibility Study: University for Health Services in Sierra Leone, 1971, AFR/EMT/39, Rev. 1