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P R O P

LOFA COUNTY

RURAL HEALTH PROJECT

October 23, 1974

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FORWARD - LOFA COUNTY RURAL HEALTH PROJECT

In the Spring of 1973, A.I.D. financed a contract study by the American Public Health Association entitled "Rural Health Services as an Outreach of the John F. Kennedy Medical Center". This study, which has become well known among interested parties as the "Derryberry Report", explored the feasibility of a rural health plan first described in a paper prepared by Dr. Nahemiah Cooper, Medical Director of the John F. Kennedy Medical Center (JFKMC). (The Cooper paper is included in the Derryberry Report as Appendix A.).

The majority of the information and data contained in the Derry-Berry Report, as well as many of the constraints it identified, remains as valid today as when the report was prepared. Thus, we wish to incorporate the Derryberry Report, by reference, as an integral part of the Lofa County Rural Health Project (LCRHP).

Nevertheless, significant changes have occurred in Liberia, which make some of the Derryberry Report's assumptions and implementation plan blazes passe. Most significant among the changes is the re-vitalization of the leadership and staff of the Ministry of Health and Social Welfare (MOH) and its mandate from the President of the Republic to take full authority and responsibility for the successful implementation of expanded rural health facilities within Liberia.

The MOH has taken its responsibilities seriously and has developed, using Dr. Cooper's paper and the Derryberry Report as significant inputs, a revitalized and innovative rural health delivery system as a contribution to the Government of Liberia's highest development

priority, Integrated Rural Development. After discussing the MOH's program and overcoming certain areas of disagreement, some of which resulted from an invalid USAID/L assumption that the Derryberry Report was universally acceptable to the GOL, USAID/L, in close collaboration with the MOH and with a significant degree of MOH direct participation, prepared the attached PROP to seek A.I.D. funding for a pilot project in Lofa County designed to test the thesis of the MOH program. At various stages in the preparation of the PROP AID/W also provided significant assistance.

The PROP identifies with candor areas in which the assumptions on which the PROP is based are weak due to the lack of adequate information and the existence of factors impinging on the project over which little or no control exists. Nevertheless, USAID/L believes the document justifies the A.I.D. support necessary to achieve the project's purpose and overall goal.

Essentially, the project consists of a broad-based pyramid of rural health units with increasing sophistication of available services, ending up with the John F. Kennedy National Medical Center (NMC) as the ultimate source of technical expertise. The MOH is responsible for the funding, planning, implementation and ultimate success of the project. The MOH is well aware of the extent of its responsibility and has shown commendable zeal in taking up these responsibilities and the leadership of the program.

Throughout the PROP, every possible attempt has been made to explain in as much detail as is available the reasoning behind its

content. This has been done through the use of a large number of exhibits, including Exhibit O, which responds to Section 113 of the Foreign Assistance Act (The Percy Amendment) with regard to how the project benefits women. However, there are missing bits of data which will be obtained upon further field examination of sites for the units of the project, e.g., exact data concerning the construction work to be done at each unit and center, and what it will cost, transportation facilities to the site, etc. This information will be obtained in the course of project implementation. We do not believe it to be information essential for A.I.D. Washington consideration of this PROP, since this work will be GOL financed and the GOL is aware of the cost of implementation.

AID 1020-1 (5-71) (FORMERLY ...)

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I. PROJECT IDENTIFICATION

C. PROJECT TITLE

LOFA COUNTY RURAL HEALTH

APPENDIX ATTACHED ☐ YES ☐ NO

2. PROJECT NO. (M.O. 1095.2)
669-11-530-125

3. [illegible] (Specify)
☒ COUNTRY LIBERIA
☐ REGIONAL ☐ INTERREGIONAL

4. LIFE OF PROJECT
BEGINS FY 75
ENDS FY 79

5. SUBMISSION
☒ ORIGINAL 10/30/74 DATE
☐ REV. NO. DATE
CONTR./PASA NO.

II. FUNDING ($000) AND MAN MONTHS (MM) REQUIREMENTS

A. APPRO. & MY FISCAL YEAR	B. TOTAL $	C. PERSONNEL (1) $	C. PERSONNEL (2) MM	D. PARTICIPANTS (1) $	D. PARTICIPANTS (2) MM	E. COMMODITIES $	F. OTHER COSTS $	G. PASA/CONTR. (1) $	G. PASA/CONTR. (2) MM	M. LOCAL EXCHANGE CURRENCY RATE: $ US ____ (U.S. OWNED) (1) U.S. GRANT LOAN	(2) COOP COUNTRY (A) JOINT	(2) COOP COUNTRY (B) BUDGET
1. PRIOR FUNDING ACTUAL FY	-0-											-0-
2. OPRN FY 75	598	80	20	73	64	432	13	80	20			477
3. BUDGET FY 76	606	328	64	10	12	219	49	328	64			610
4. BUDGET +1 FY 77	525	361	64	-0-	-0-	125	39	361	64			625
5. BUDGET +2 FY 78	511	397	64	-0-	-0-	78	35	397	64			689
6. BUDGET +3 FY 79	346	319	42	-0-	-0-	-0-	27	319	42			157
7. ALL SUBQ. FY	-0-											-0-
8. GRAND TOTAL	2586	1485	254	83	96	854	164	1485	254			2498

J. OTHER DONOR CONTRIBUTIONS

(A) NAME OF DONOR	(B) KIND OF GOODS/SERVICES	(C) AMOUNT
1. ONCHOCERCIASIS CONTROL PROGRAM	1. Vaccines	1. $ 34
2. CARE	2. Construction supervision & funds	2. $ 50
3. CURRAN LUTHERAN HOSPITAL	3. Hospital Operating Costs	3. $ 440

III. ORIGINATING OFFICE CLEARANCE

1. DRAFTER R. L. Friedlich	TITLE Deputy Program Officer	DATE
F. C. Hagel	Deputy Assistant Director, D. S.	10/30/74
2. CLEARANCE OFFICER Stanley J. Siegel	TITLE Director	DATE 10/30/74

IV. PROJECT AUTHORIZATION

1. CONDITIONS OF APPROVAL

2. CLEARANCES

BUR/OFF.	SIGNATURE	DATE	BUR/OFF.	SIGNATURE	DATE

3. APPROVAL AAs OR OFFICE DIRECTORS

SIGNATURE | DATE

TITLE

4. APPROVAL A/AID (See M.O. 1095.1 VI C)

SIGNATURE | DATE

ADMINISTRATOR, AGENCY FOR INTERNATIONAL DEVELOPMENT

I. Project Goal

A. The goal of this project is to make expanded and substantially improved basic health services more accessible to Liberia's rural population. It is estimated that only 20-30% of Liberians receive basic health services. These are concentrated in urban areas, and stress curative rather than preventative measures. Further, services available to the rural areas are substantially inferior to those available in the major centers, and especially Monrovia.

B. Measurement of Goal Achievement--Goal achievement will be measured by the provision of basic health services to a greater proportion of the rural population of Lofa County and by statistically valid decreases in major health indicators, e.g., morbidity, mortality and fertility rates. However, due to the inadequacy of existing data concerning both the accessibility of services and the quality of those services, it is not possible to project specific figures for goal achievement prior to project implementation.

Meaningful goal-achievement projections must be based on detailed knowledge of the quality, accessibility and cost of existing services. Thus, a key element of the project involves the design and implementation of a system for gathering relevant baseline data. Because of the importance of having such information for project implementation and evaluation, this effort will begin immediately upon arrival of the U.S. advisors in Liberia. The data obtained will permit the development within 6 months of appropriate quantitative yardsticks with which to adequately project and test goal achievement. At a minimum, such yardsticks will include projected reductions of the crude death rate, the infant mortality rate, the incidence of debilitating diseases (e.g. malaria, bacillary disorders, etc.), and the population growth rate and child spacing patterns.

It should be emphasized, however, that although qualitative measurement of the level of available services during the life of the project is possible, certain quantitative measurements, i.e., reductions in morbidity, mortality and fertility rates, involve data which changes only slowly over time. Thus, significant changes may not occur during the four-year life of the project.

On the other hand, quantitative measurement of the accessibility of services is less difficult and will be available during the life of the project.

C. Basic Assumptions Concerning Goal Achievement

1. That AID/GOL is willing to support the program with the resources required to make a valid test of its feasibility.

2. Valid measurement devices of goal achievement indicators can be developed at the earliest possible stage of project implementation.

3. The availability of preventative, curative and family planning services through a regular institutionalized program will attract patients at an increasing rate during the four-year life of the ICRH.

4. The acceptance of the services provided by the ICRH will result in reduced morbidity and mortality, the increased use of child spacing techniques and will enable the residents of Lofa County to participate more fully, particularly through self-help, in Liberia's integrated rural development program and, concomitantly, in Liberia's overall economic growth.

II. The Project Purpose

A. The Statement of Purpose

The purpose of the project is to establish an integrated health/family planning delivery system in Lofa County which will provide more accessible, expanded and improved preventive and curative health services and family planning services to the people of the county and may be appropriate for replication in other Liberian counties.

B. Conditions Expected at the End of the Project

1. Establishment of System

a. An integrated health delivery system established with an appropriately trained staff to provide effective preventive, curative and family planning services.

(i) Thirty health posts in operation. Each will be staffed with two Health Assistants who have received special problem-oriented training enabling them to diagnose and treat certain specified common ailments, to dispense certain specified basic drugs (specific ailments to be treated and drugs to be dispensed will be identified during the first six months of the project, although a listing of existing diseases and drugs used is contained in Exhibit B) and to provide family planning services.

(ii) Five health centers in operation. They will be staffed by two medical assistants (who have received special advanced problem-oriented training), two mid-wives, one health assistant, one lab technician, two nurses and one sanitarian. The centers are higher level facilities capable of diagnosing and treating a wider range of illnesses than health posts.

(iii) Two county hospitals organized to supervise and provide technical guidance to the health centers and health posts, as well as handle more complicated cases referred to them by the health centers and posts.

(iv) NMC organized to provide, upon request, technical guidance to the county hospitals.

b. A system capable of effectively providing services to at least 15% of Lofa County's population in the first full year of operation, 35% the following year and up to 70% by the end of four years of operation.

c. An MOH capable of administering and financing the total system in Lofa County when foreign assistance terminates.

2. Effectiveness of the System

a. TNIMA will have adopted improved curriculum and teaching techniques and have staff to provide quality, up-to-date, relevant training.

b. An MOH capable of keeping staff vacancies to a minimum.

c. More preventative, curative and family planning services provided in the county, resulting in measurable downward trends in present morbidity, mortality and fertility rates.

d. Improved preventive and curative services provided throughout the county, with equal priority given to:

(i) preventive education programs, designed to ensure that the majority of people in the county become aware of basic nutritional requirements, simple hygiene and curative services available (as measured through observation, sample surveys and patient records) and the virtual elimination of epidemics for which vaccines are available; and

(ii) systematic mass immunization campaigns to be carried out against preventable diseases, particularly children's diseases.

e. Health posts, health centers and country hospitals carrying out family planning information and education programs (emphasizing child spacing techniques) and materials developed/adapted by the MOH to respond to the Liberian socio-cultural environment.

f. Family planning services and commodities reaching a majority of the women at risk.

(i) An acceptor rate of 10 to 15% of women at risk achieved. (An acceptor is one who remains free of pregnancy for one year.)

(ii) Women using IUD's return bi-annually for medical checkups to ascertain that the device is in place.

(iii) Women taking pills return regularly for the supply of pills necessary to ensure constant protection.

(iv) Health staff conducts follow-up programs on delinquent acceptors, i.e., women who do not return for IUD checkups and those who do not return for pill supplies or interview, to determine the reason.

(v) The dropout rate for IUD users less than 2 out of 5; for pill users, it will be less than 50% after the fourth year.

g. An MOH procuring, storing, accounting for, and efficiently distributing in a timely manner medical, family planning and other supplies and equipment required for the provision of health services in Lofa County.

h. Capability within the Health Posts and Health Centers to maintain client records, historical profiles, incidence of medical and family planning services and the results of these services.

i. The radio communications network in operation between the health centers, county hospitals, the NMC and the MOH, handling medical consultation and administrative matters.

3. Replicability of System

a. The per capita cost of the services provided in Lofa County will be within the financial capability of the GOL to systematically expand throughout Liberia within a reasonable period of time. (An estimate of the maximum per capita cost which the GOL can afford will be developed in coordination with the GOL during the first 6 months of the project.)

b. An MOH evaluating the effectiveness of the system and modifying it to address problems identified.

c. An MOH planning and programming the expansion of the system into other counties based on the training provided and experience and data (including birth, death and disease data) obtained in establishing the program in Lofa County.

d. An MOH providing effective training of staff for the systematic expansion of the program in other counties.

C. Basic Assumptions

1. The LCRH provides a valid pilot vehicle for testing the feasibility of the MOH-proposed rural health system.

2. When drugs and vaccines are readily available and health education programs are functional through an institutionalized system, most Lofa County residents motivated to utilize available immunization, preventative, curative, nutrition/ feeding and hygenic health services.

3. Family planning information and education programs and the availability of modern contraceptive devices within the context of generalized health services motivate Lofa County families to practice family planning, with particular emphasis on child spacing for improved mother and child health.

4. The GOL/MOH provides adequate personnel, procedural guidance and special emphasis to the supervisory requirements of the medical program, e.g., the NMC will provide adequate supervisory support to the county hospitals, the county hospitals to the health units and the health units to the health posts.

5. The NMC and TNIMA train sufficient field staff to meet the needs of health posts, health units and county hospitals as perceived by the management of the LCRH.

6. The GOL/MOH is able to retain trained personnel in those job specialties for which they were intended.

7. The GOL/MOH continues to support this project purpose through its own policy and budgetary actions. That it remains aware of the budgetary implications of a successful pilot operation.

III. PROJECT OUTPUTS AND OUTPUT INDICATORS

A. Statement of Project Outputs and Output Indicators

1. a. A personnel system consistent with that being developed with A.I.D. assistance under the Civil Service Development Project (CSD) will be applied to the LCRH.

   b. Universal job classification descriptions and standards, recruitment and selection criteria, training, salary scales, leave regulations, merit promotion, grievance systems, etc. will be formulated and adopted by the GOL under the CSD and this system applied to the approximately 220 employes which constitute the LCRH -- exclusive of PHC and Curran Lutheran Hospital at Zorzor (Curran) employees -- (see Exhibit E). Hopefully, the CSD will lessen the high loss of trained personnel stationed in the field due to the lack of incentive provided by GOL salaries and benefits.

   c. The CSD personnel system will be initiated within 18 months of project initiation and will be fully operative in the LCRH within two years.

2. a. Administrative, paramedical, skilled and semi-skilled personnel required to operate the LCRH health posts and centers will be trained, or retrained, and in position to operate the LCRH; paramedical, skilled and semi-skilled personnel will be trained, or retrained, to operate the hospitals in Lofa County, and necessary medical personnel will be in training; and the counterparts of the A.I.D.-provided advisors will have received additional training and experience.

   b. Functional programs utilizing modern training methodology at the Tubman National Institute of Medical Arts (TINIMA), the A. M. Dogliotti College of Medicine, and foreign institutions will produce the additional trained personnel required to complete the staffing of the LCRH (see Exhibit I for types, quantities, sources of instruction and timing requirements). On-the-job training for counterparts of A.I.D.-provided advisors will have occurred as a natural function of the advisory nature of the services provided.

   c. All training will be completed prior to project completion, except for one physician (see Exhibit I).

3. a. A uniform medical record system for patients compatable with that used at the NMC will be developed and used; this will result in increased efficiency in patient handling and an additional source of reliable data about Lofa County.

b. Records of births, death, incidence of disease, contraceptive practices, vaccinations, etc. will be compiled and published (see Exhibit B and D for existing and pre-project percentage estimates of project year utilization of drugs, vaccine, and patient utilization of medical services by disease).

c. The record and reporting system will be functional at the end of 18 months.

4. a. Family planning programs will be operational in all units of the LCRH.

b. Comprehensive family planning services, emphasizing child spacing for improved mother and child health, will be available at the NMC and Lofa County Hospitals; family planning services, exclusive of surgical services, will be available at health centers and posts.

c. Family planning services will be available at all LCRH units immediately upon completion of specialized training and receipt of commodities. In a few cases, such services will be available within six months after the start of the project, although some units may take up to two years to get the program fully operational. In varying degrees, such services are available at present at the hospital level. (See Exhibit J for input details).

5. a. Sample surveys and similar data producing techniques to obtain baseline data for project evaluation purposes will be formulated and implemented within the project area.

b. Due to the lack of reliable existing data, baseline data will be obtained, initially, through the organiza- of sample surveys at selected health posts, health centers and hospitals in the project area. Similarly, existing data will be validated, forms for the collection of new data developed and put into operation, and provision made for periodic review of this data to measure project progress.

c. The data collection system will be initiated at the beginning of the project and reviewed and up-dated at

4-month intervals throughout the life of the project, including yearly reviews at the end of years 2 and 3 and a special two-month project evaluation during the final two months of the project.

6. a. A supervisory policy and procedure manual will be developed and installed to show relationships and responsibilities between the unit components of the project.

b. Utilizing data compiled and verified through an on-site survey of health posts, health centers and Lofa County hospitals, workloads will be evaluated by the MOH and various donors to facilitate project design modifications. Analysis of results will be utilized to improve the provision of project services.

c. The compilation and analysis of data for the manual will be completed within the first 12 months of the project and the manual placed in general use within 15 months after project initiation.

7. a. A systematized immunization program will function at the health post, health center and county hospital levels of the project.

b. Immunization programs reaching Lofa County residents, with emphasis on children under 5 years of age, will be carried out at the rates estimated in Exhibit D.

c. The immunization program will be in operation upon receipt of necessary vaccines and the completion of staff training; the program should be in full operation by the end of the first year of the project, with some project units being in operation as early as four months after project initiation. Some work along these lines was done by A.I.D. through its West Africa Regional Measles/Smallpox Program and is being done now under UNICEF's "Special Services for Children" project.

8. a. Potable water supplies and sanitary latrine facilities will exist at all health posts, and health centers, and in villages as developed through self-help projects.

b. All health posts and centers will have two potable water wells and two sanitary latrines (see Exhibit H for details). (Villages will be able to obtain similar facilities, if they so desire, by initiating self-help projects). (Two wells located separately will be provided because they will be surface water wells -- 40 feet in depth -- and the highly permeable nature of the soil makes contamination a high risk possibility).

c. Water and latrine facilities will be completed for 20 health posts and 4 health centers by the end of the first year of the project; the remaining ten health posts and 1 health center will have such facilities within 18 months of the beginning of the project.

9. a. Construction and rehabilitation will be completed, as necessary, for medical facilities participating in the LCRH.

b. Of the LCRH's 30 health posts, 20 will be renovated and ten will be newly constructed (see Exhibit H for details).

c. During the first year of the project seven new health posts will be constructed and 20 renovated; the new health center will be constructed and three others renovated. The remaining three new health posts and the one remaining health center renovation will be completed within the first three months of the project's second year.

10 a. A communications, supply and transportation network will be designed and implemented which will provide: (i) radio communication between the health centers, county hospitals, the MHC and the MOH to handle expeditiously both medical consultation and administrative issues; (ii) an effective commodity procurement, transportation and distribution system for supplies and equipment; and (iii) transportation for project advisors. Additionally, transportation services for non-ambulatory patients between units of the LCRH will be operational.

b. The communications, supply, and transportation network of the LCRH will consist of 9 radios (five for health centers, 2 for county hospitals (Curran and Voinjama) and 1 each for the MHC and MOH); three quarters of the time of one truck with driver and assistant; 2 ambulances; field duty vehicles for each of the five health centers; and vehicles for each of the four full-time project advisors (see Exhibits C, E, and G for details).

c. All elements of the communications, and transportation system, including regular scheduling of medical consultative and administrative radio communication, will be operational within one month after receipt of the necessary equipment and supplies. Full scale operation of the supply and distribution network may take up to 12 months after project initiation.

II. a. An evaluation system will be designed and implemented which will provide for: (i) on-going evaluation and modification through an effective feedback mechanism; (ii) annual evaluations to permit appropriate adjustment of the project elements to reflect new situations and information; (iii) a major end-of-project evaluation to be carried out with the assistance of an external evaluation team to measure the degree to which the project's goal and purpose have been achieved and to arrange, if deemed feasible, for the replication of the system in other Liberian counties; and (iv) long term evaluation/measurement of the impact of the project on the people of Lofa County.

b. The evaluation system will be initiated by the part-time social science researcher during an initial 2-month TDY at the start of the project and modified, as required, every 4 months thereafter during the remaining life of the project as part of scheduled TDYs. At the end of the project a special two-month study/evaluation of the entire project will be carried out with the assistance of an external evaluation team. Regular yearly evaluations will be held at the end of years 2 and 3 of the project.

c. The evaluation system will be initiated at the beginning of the project and continually monitored and modified, as required, throughout the life of the project.

B. Basic Assumptions

1. By the end of the project the GOL will have assumed responsibility for the provision of all funds necessary to support the continuing costs of the project, e.g., in-country training, locally available supplies, personnel, and drugs.

2. The CSD will have been completed in a manner enabling the timely introduction of the improved personnel system needed by the LCRH.

3. President Tolbert's statements concerning family planning will assure support at all levels of the GOL, including support for the training of paramedical personnel, for the provision of family planning information/education and non-surgical commodity services.

4. Suitable candidates for training will be found and their training programs will be successfully completed.

5. Adequate coordination will be exercised by and among the various other GOL ministries, e.g., Planning and Economic Affairs, Agriculture, Education, Local Government, Public Works, etc., whose assistance will be required to enable the MOH to carry out, successfully, the LCHH.

6. The residents of Lofa County desire the services the LCHH will make available and they will respond to them, including the initiation of self-help projects, e.g., the construction of sanitary latrines and potable water wells.

IV. PROJECT INPUTS

A. Statement of Project Inputs

1. Project Inputs -- A.I.D.

a. Personnel services will be provided through a project team to work with GOL colleagues (see Exhibit F for additional details).

(i) One Health Administrator (Public Health Generalist) will be provided for four years. He will serve as Chief of Party (COP) of the team and will be responsible for the over-all contributions of the team to the LCRH. Stationed in Monrovia, the COP will work in a counterpart relationship with the MOH Project Coordinator (PC) assigned to the LCRH from the MOH's Bureau of Medical Services. The COP will spend up to 25 per cent of his time in Lofa County developing, administering and monitoring the policies and procedures necessary to implement the project. Previous comparable supervisory experience, particularly in a developing country, is an employment prerequisite.

(ii) One technical Teacher/Trainer (T/T) will be provided for four years to work in a counterpart relationship with the Director of the School of Physician Assistants, TNEMA. Stationed in Monrovia, the T/T will divide his time between the development and initiation of improved curricula at TNEMA and teaching specific courses on a counterpart basis with technically trained Liberians requiring additional technical and teaching skills and experience. The curricula to be developed for the majority of students (LCRH retrainees and in-service trainees) will concentrate on preventative medicine, e.g., health education, immunizations, environmental sanitation, nutrition and family planning, although special emphasis will be made on diagnostic techniques and curative medicine for those students enrolled in the Health Assistant Training Program. A physician with experience in paramedical program administration and teaching is preferred, although equivalent experience will be acceptable. A minimum of time, approximately 10 percent, will be spent in Lofa County assessing the field effectiveness of the training programs.

(iii) One Family Planning Generalist (FPG) will be provided for four years to work with other team

members and their counterparts in promoting family planning programs. Stationed in Lofa County, the FPC will spend his time introducing family planning information/education, contraceptive services, training, and family planning analysis techniques at all levels of the program. Experience in a less developed country, familiarity with all aspects of family planning, demonstrated skill as a teacher/motivator and an ability to live and function smoothly in a remote field environment are requirements for the job.

(iv) One Supply and Logistics Specialist (SLS) will be provided for two years to work with colleagues at the NMC and various MOH counterparts in the field to design and implement systems for procurement, storage, distribution and reordering of all supplies and equipment required for the LCHH. Stationed in Lofa County, the SLS will spend only a minimum of time in Monrovia working out complementary and standardized forms with his colleagues at Liberia's centralized drug warehouse at the NMC. Prior experience, particularly in a less developed country, and ability to live in a remote up-country area will be a prerequisite.

(v) Social Science Research/Systems (SSR/S) analytical assistance will be provided on a scheduled, but intermittent basis. Arriving with the full-time advisors, up to two man months of initial study and design work will be followed by: 10 one-month data collection and evaluation trips (one every 4 months); continuing evaluation, analysis and publication (utilizing the quickest, most feasible and practical techniques) of data using the facilities of the team's home office (a total of six man months of home office work); and a final two-month evaluation visit during the last two months of the project. This element is one of the most crucial, considering the impact it may have on potential donor consideration of the advisability of helping the MOH replicate similar projects in other Liberian counties, or the desirability of the GOL, itself, continuing the program along existing lines. This element will also be a strong factor in project design changes during implementation, so the SSR/S advisor must be well experienced in both field and home office skills and techniques of data collection and analysis. It is advisable that the field work be performed by the same consultant each trip in order that meaningful working relation-

ships can be established with counterparts from the MOH and Ministry of Planning and Economic Affairs, as well as be fully cognizant of the techniques in use.

(vi) An estimated 10 man months of additional short-term consultant services will be required during the life of the project. Approximately 5 man months of these services will be provided by a TDY cost accountant. The accountant will be required for some 2 to 3 months during the initial design phase of the project and for four additional trips during the first two years of the project to develop a cost system that will identify costs related to the LCRH and train a Liberian counterpart in rural health system cost management and projection. Exhibit K summarizes the relationship of technician services to output indicators.

b. Training will be provided for the following participants, exclusive of international travel costs. Additional details concerning this training are included in Exhibit I.

(i) Health Center Team Leaders (5). These individuals will be responsible for the comprehensive operation and administration of the 5 LCRH centers. Their training will be carried out in a third country, probably Nigeria. The basic pre-qualification for their selection will be that they are a qualified Medical Assistant.

(ii) Family Planning Training for Health Center Midwives (5). These individuals will provide the most technically competent "ground root" support for the Family Planning Program. They will be trained in the U.S., or in a third country.

(iii) Nurse Midwife Trainers (2). Registered nurses will be sent to the U.S. to be educated as teacher/trainers for midwife training programs at TNDM.

(iv) Rural Health Program Administrator (1). We anticipate that the Project Coordinator for the LCRH initially appointed by the MOH will be an expatriate, with additional responsibilities at present, assisted by a less qualified colleague. The Rural Health Program Administrator participant will be trained in the administration of rural health extension programs in order to assume, eventually, the expatriate's present responsibility for all

MOH rural health programs, as well as the LCRH.

c. A.I.D. will provide the drugs, equipment and supplies, vaccines, vehicles and family planning commodities and supplies detailed in Exhibits B, C, D, G and J.

2. Project Inputs -- UNICEF

a. UNICEF will provide the TB and DPT vaccines described in Exhibit D, through its Selected Services for Children Program.

b. UNICEF has ordered a well drilling rig for the Ministry of Local Government, Rural Development and Urban Reconstruction, which is enroute. This rig will be an essential element in the well drilling aspects of the LCRH and will be made available to the MOH. The cost of this input is not contained in Exhibit A or Part IV.B. of this PROP.

3. Project Inputs -- Curran Lutheran Hospital at Zorzor

Curran Hospital receives approximately $110,000 in contributions per year of financial, personnel, and other support resources from the religious group with which it is affiliated. This support is expected to continue for the four years of the LCRH, although the hospital may be absorbed, eventually, by the MOH because the donor organization wishes to withdraw from this ongoing and successful project. Although the GOL makes a yearly budgetary contribution of $20,000, it makes no attempt to conform the hospital's management with the rest of the GOL/MOH system out of consideration for the source of its major financial support. However, Curran does work in close harmoney with the MOH (see Appendix A, Page A-23 of the Derryberry Report for an indication of the Hospital's interest in a rural health system).

4. Project Inputs -- CARE

CARE may provide up to $50,000 in financial support, in addition to supervisory services, for the construction/renovation of health posts and health centers provided agreements can be worked out to assure MOH support and an element of local self-help participation (as available) by residents. CARE has, in fact, carried out similar projects in the past.

5. Project Inputs -- GOL

a. The MOH will provide all the personnel detailed in Exhibit E (Curran Hospital personnel are excluded from Exhibit E).

b. The MOH will have at site or identify by name all personnel to be project trained within three months of the arrival of the A.I.D.-provided project technicians, except for Health Assistant Trainees for TWIMA, and assure the availability of trainees for attendance at training programs as detailed in Exhibit I (see, also, Page 19 B.2.e. for funding information).

c. The MOH will provide funding and arrange for the construction and renovation of all facilities detailed in Exhibit H at the time of project initiation for year 1 work. For year 2 work, arrangements will be made 1 month prior to initiation of construction and renovation work.

B. Total Financial Inputs (Based upon Full Project Year Requirements)

		Year 1	Year 2	Year 3	Year 4	
1.	U.S.					
a.	Drugs	$ 91,000	$ 97,400	-0-	-0-	
b.	Equipment & Supplies	84,167	40,000	$ 40,000	$ 20,000	
c.	Vaccines	37,345	41,424	45,556	23,000	
d.	Consultants	320,000	352,000	387,200	425,920	
e.	Training	73,300	10,100	-0-	-0-	
f.	Family Planning	140,000	50,000	50,000	45,000	
g.	Vehicles	89,500	-0-	-0-	-0-	
h.	Project Contingency	41,766	29,546	26,138	25,696	
		$877,078	$620,470	$548,894	$539,616	
				Project Total		$2,586,058
2.	GOL					
a.	Equipment and Supplies	$ 51,493	$ 6,493	$ 7,142	$ 27,856	
b.	Drugs	-0-	-0-	107,140	117,854	
c.	Construction	148,120	47,180	-0-	-0-	
d.	Personnel	292,305	321,536	353,690	389,059	
e.	Training	68,000	148,000	85,000	10,000	
f.	Grant to Curran Hsp.	20,000	20,000	20,000	20,000	
g.	Vehicles	24,400	26,840	29,304	32,234	
h.	Project Contingency	31,000	31,000	31,000	31,000	
		$635,318	$601,249	$633,276	$628,003	
				Project Total		$2,497,646
3.	Other Donors					
a.	Vaccines (UNICEF)	$ 5,655	$ 8,576	$ 9,500	$ 10,500	
b.	Construction (CARE)	35,000	15,000	-0-	-0-	
c.	Curran Hospital	110,000	110,000	110,000	110,000	
		$150,655	$133,576	$119,500	$120,500	
				Project Total		$ 524,231
					GRAND TOTAL	$5,608,135

C. Basic Assumptions About Inputs

1. It is assumed that all conditions precedent to A.I.D. obligation for the LCBH will be completed by November 30, 1974.

2. Adherence to the implementation plan (part VI. A. of this PROP), which indicates the timing of the various project inputs, is assumed.

3. Full contribution by other donors of their inputs as contained in this PROP is assumed.

4. It is assumed that the GOL/MOH will provide personnel for training as scheduled.

5. Cooperation and coordination in the use of the warehousing facilities at the MSC is assumed.

V. Rationale

A. The Health Problem

Liberia's health problems are those common to developing countries situated in a tropical environment whose populations live within the vicious circle of disease, ignorance, poverty and more disease. Among Liberia's common health problems are diseases associated with vectors whose control is very expensive and complex (e.g., malaria, shistosomiasis, trypanosomiasis, etc.), lack of potable water, unhygienic handling of food and inadequate sewerage disposal (which result in a high incidence of gastro-intestinal diseases), and malnutrition, which substantially increases the population's general susceptibility to disease and parasites, and places a further burden on Liberia's limited health resources.

As the Derryberry Report points out, Liberia's public health system is severely strained to meet even the most basic demands of the population. In rural areas, such as Lofa County, where there are fewer physicians, facilities, and drugs, and less access to Health Services, even basic health care is denied to most. The following comparative health statistics, U.S. and Liberian, cogently relate the problem:

	U.S.	Liberia	Lofa County**
Beds per population*	13.5/1,000	1.7/1,000	1/1000
Physicians per population	1/613	1/9600	1/38750
Nurse/dresser per population	1/107	1/2000	1/2200

** Estimated

These statistics, while delineating the problem, clearly understate it, since they fail to reveal that government hospitals and clinics throughout Liberia operate at a substandard level due to limited manpower resources, inadequate financial and logistical resources and a maldistribution of personnel and facilities. (These statistics also show the marked disparity in the provision of curative/preventive health services between urban and rural areas.)

In spite of the present low level of health services, Liberia's population is growing at an estimated 3% per year. Should this trend continue, substantial increases in the health budget will be required just to maintain the current level of services.

The Ministyy of Health (MOH) is headed by a Minister with cabinet rank and is responsible for the delivery of preventive health services throughout the country and curative services outside of Monrovia.

* See Exhibit M for a breakdown of the location and ownership of hospital beds in Liberia.

The Ministry, which was recently reorganized, has 5 Bureaus: Medical Services, which includes hospitals, clinics and dental services; Preventative Services, which includes environmental sanitation MCH, vector control, communicable disease control, epidemiology and statistics; Planning and Development; Social Welfare and Administration. The MOH is assisted by a National Advisory Council on health, which includes prominent physicians from the government service and private practice.

The J. F. Kennedy National Medical Center (NMC) operates under policies developed by a hospital board that is independent of the MOH (e.g., the NMC complex has its own personnel and salary system), although the Minister of Health is chairman of that board. Practically all of its operations, which include the Tubman National Institute of Medical Arts (TNIMA), are concerned with curative medicine.

For a number of years the MOH has received assistance from several foreign sources. For example, the World Health Organization and the UN Children's Emergency Fund have undertaken a number of cooperative projects in medical education, disease control and environmental health.

The U.S. has been involved with the health sector in Liberia since 1945 when it assisted the GOL in organizing a public health program. Specific AID inputs have included a loan for constructing and equipping the NMC, and, since 1966, technical assistance to make operational the hospital and its associated medical center facilities and to improve the training program at TNIMA. This AID technical assistance program is scheduled to terminate in U.S. FY 1977. In addition, AID also supported refresher training programs in MCH/FP in fiscal years 1971 and 1972.

Medical missionaries and the concessionaires have also played a key role in expanding Liberia's health system. In general, medical care currently provided by the missions and concessions represents a large part of the health care received by the population--perhaps as high as 50%.

However, the GOL has taken an increasingly active part in health matters since WHFI and a successful outreach effort will dramatically increase the level and quality of this involvement over the next few years. Total GOL expenditures for health and social welfare in 1973 are estimated to have been $7.6 million, of which $5.8 million were from GOL funds and $1.8 million from foreign loans and grants. This represents approximately 7% of total GOL expenditures in all sectors. Total recurrent expenditures were estimated at $5.8 million, of which $3.1 million (53%) was consumed by the JFK medical complex in Monrovia.

Of the total health budget, $2.5 million or about 43% went to the national public health services, $2 million or about 34% went to hospitals and clinics, and about $.5 million or about 9% were invested in preventive services. The remainder was spent for social welfare programs.

Thus, three very important points are suggested by available information regarding the requirements of any viable program designed to address Liberia's health problem. First, a dramatic shift in emphasis is required to provide expanded and improved health services to rural areas. Second, the incremental cost of a revised system must be minimized if the GOL is to be able to afford such a system. Third, to maximize the impact of an expanded system, major emphasis must be placed on providing preventative and family planning services.

The GOL has become increasingly sensitive to the needs of its rural population and, in this context, has designated, "integrated rural development through balanced regional planning in agriculture, education, health, transportation and communications" as the top national developmental priority. More specifically, the Ten Year National Health Plan for Liberia (1967-1976), which developed guidelines toward meeting the health needs of Liberia, suggests substantial awareness regarding the requirements of viability. Thus, the plan states that within the financial resources of the GOL, "full availability of all necessary health services (will be made) to the people of Liberia regardless of caste, tribe, clan or locality." The plan also states that the primary concern will be to place greater emphasis on the prevention of disease and promotion of health.

More recently, in a National radio address on October 2, 1972, Liberian President William R. Tolbert, Jr. outlined the Government's recognition that, ". . . the greatest resource we have, or that any nation may ever have, is people, without which no plans, however ambitious can be effectively and successfully prosecuted." In this address he outlined plans to overhaul the health care delivery system so that it would:

a. interrelate all health activities, preventive and curative, in a manner that would make medical care available to all;

b. focus on malnutrition and mortality among infants; and

c. create a health delivery system in which the JFK would constitute the highest level of technical medical expertise.

Regarding the need for family planning, President Tolbert indicated in May 1973 that, "Somewhere along the line, the impression may have been left that our Health Policy precluded the concept of family planning. This is an illogical assumption. It would

be self defeating to advocate the raising of living standards, while at the same time denying the need for qualitative improvement. Responsible parenthood is just as important as responsible fiscal policy."

Thus, within the context of a growing GOL commitment to improve and expand the health services provided to people in the rural areas, the Medical Director of the JFK National Medical Center developed in 1972 a detailed conceptual framework for an innovative rural health delivery system as an outreach activity of the NMC. This proposal reflected the clear realization by the GOL that, "any acceptable ratio of physicians to population which would satisfy the needs of the Country is not an attainable objective in the ensuring generation. . . In this environment, and at our level of development, the accent in health care must be on the preventative aspect." The program proposed by the Director is based on the following premises: (1) in the absence of an adequate number of doctors, or reasonable prospects for their availability in the forseeable future, the majority of the population must be treated by appropriately trained paraphysician personnel; (2) any long-term improvement in the health of the population will result primarily from the introduction of an active, effective preventative medicine program; and (3) in order to be consistant with the GOL's broader development goals, a health program in Liberia must include a family planning element in view of the direct correlation between the health of children and mothers and the spacing of births.

In January 1973 AID was approached by the GOL to fund a pilot project in Lofa County to test the proposed rural health delivery system. In response, on March 13, 1973, a team of consultants was sent to Liberia to determine the feasibility of the proposed concept. In its report, the team strongly endorsed the proposed project and recommended its early implementation. At the same time, the report detailed recommendations for strengthening various components of the project.

Based on the recommendations contained in the Derryberry Report, a PPP was prepared by AID/W in May 1973. Subsequently, a change in leadership occurred in the GOL/MOH which resulted in some modification of certain administrative aspects of the project and with the MOH absorbing additional responsibilities.

B. Project Description

1. Summary Description - The project consists of the development of an integrated health delivery system in Lofa County to provide preventative and curative health services and family planning services to the people of the county. The project will be implemented over a 4 year period by the Ministry of Health and Social Welfare. If this pilot project is successful, the program will be replicated throughout the rest of Liberia.

The proposed health delivery system involves the following major elements: (1) health facilities located at strategic points within Lofa County to assure maximum accessibility of services to the population; (2) the staffing of these facilities with specially trained paramedical personnel; (3) the incorporation of health posts, health centers, county hospitals and the National Medical Center into an integrated system for delivering (in an ascending order of complexity) expanded curative and preventive health services and family planning services; (4) the development of an adequate drug and medical supply system; (5) the development of an adequate system for supervising the performance of paramedical personnel; and (6) the establishment of a radio communications system to facilitate administration and supervision of the system.

2. Facilities and Personnel

a. Health Posts (30)

Posts will service approximately 4,000 to 5,000 people and be staffed by two Health Assistants (also known as Physician Assistants in some lexicons), preferably with a minimum of an eleventh grade education and 24 months of special training. They will be capable of diagnosing and treating certain prescribed common illnesses and emergencies and providing preventive health education, family planning information/education and non-clinical family planning services, i.e., orals, condoms, foam, etc. Health problems beyond the scope of the post will be referred to a Health Center. One of the Health Assistants will concentrate on preventative services at the village level; the other will work at the post in a curative capacity. However, the Health Assistants will be cross trained and will periodically rotate roles. In view of the importance of clearly delineating the types of illness which are to be treated at the Health Posts, both in terms of designing a training program and adequately protecting the health of persons treated at these facilities, guidelines will be developed as part of an implementation plan during the first 3 to 6 months of the project by the staff of the MOH, NMC, and TNDMA with the assistance of the U.S. advisors. See Exhibit E for further detail concerning Health Post staffing.

b. Health Centers (5)

One center will exist for every 4-6 health posts and be staffed by 9 professional paramedical personnel: 1 Health Team Leader (Medical Assistant with 6 months of special

administrative training), 1 Medical Assistant, (RN plus 1 year of practioner-oriented training), 2 midwives, 1 Health Assistant, 2 nurses (Practical Nurse training plus public health orientation), 1 sanitarian, and 1 laboratory technician. The Centers will provide comprehensive rural health services and will supervise the work of health posts. Service will include out-patient medical care, health education, instructions in community sanitation, immunizations, minimal in-patient services, and family planning information/education and complete non-surgical family planning commodity services, i.e., orals, condoms, foam, IUD's, etc. As with the health posts, the specific type of services to be performed at the centers will be determined during the first phase of the project. See Exhibit E for further detail concerning Health Center staffing.

c. County Hospitals (2)

The hospitals will supervise the operation of the health centers and handle the cases referred by health centers. Hospitals will have radio communications with the Health Centers, the NMC, and the MOH. The staffing of the MOH-financed hospital at Voinjama is detailed in Exhibit E.

d. JFK National Medical Center

The NMC will be the source of specialist services not available at Lofa County hospitals. It will provide these services by visits of medical specialists, by transferring patients to the NMC, through consultant services provided via 2-way radio communication, or through use of the MOH's airplane. In addition, a full range of family planning services will be available, including specialist capacity to backstop the family planning component of the LCRH. Also, the storage facility for the drug supplies required by the LCRH will be the supply warehouse located at and managed by the NMC, although the stores for the two units will be segregated.

e. Tubman National Institute for the Medical Arts (TNIMA)

Initial and refresher training of paramedical workers for the rural health delivery system will be carried out primarily at TNIMA, which is part of the National Medical Center Complex. Training to be provided at TNIMA will include curative techniques, preventive medicine and public health, and family planning education and methodology.

f. MOH

The MOH will be responsible for the LCRH program in its entirety, including recruitment, assignment and promotion of all program personnel in the County, coordination of donor inputs, periodic evaluation and adjustments of the program and securing the budget for operating the system. Administration of the LCRH will be the responsibility of the MOH's Bureau of Medical Services.

g. Community Health Inspectors

In addition to the personnel asaigned directly to the Health Posts, Health Centers and hospitals, Lofa County is serviced by a team of 25 Community Health Inspectors (see Exhibit E) who are responsible for the maintenance of standards. This team is administered out of the MOH's Bureau of Preventive Services and not attached directly to any of the individual units of the LCRH.

3. Discussion of Major Project Components

a. Establishment of a Preventative Medicine Program

The critical need for an adequate program of preventative medicine has been accepted by all relevant parties associated with the proposed project. However, although the theoretical value of preventative services has been accepted, it is a fact that wherever curative and preventive health services are offered the demand for curative services tends to absorb all the available health resources. Because successful curative activities produce visible results, health workers concentrate on treatment services rather than devote time to prevention, where their accomplishments are not so obvious. Thus, the proposed delivery system contains a unique plan for assuring that health prevention receives an equal share of attention. It is contemplated that at the most peripheral level of service, health posts and health assistants, there would be developed two distinct sets of functions. One of these would involve intensive education in the villages to encourage participation by the villagers in better health practices, such as good nutrition, drinking safe water, safe disposal of excreta, care of children, immunization and child spacing. The other set of functions would provide curative services at the health post. Each assistant would be trained to perform both sets of functions and the two assistants would rotate their functions periodically. This rotation would appear to have several advantages.

A person carrying on preventive work constantly urges changes in behavior which may not be entirely pleasing to the people of the community. However, a certain amount of status, respect and confidence developes for a worker who successfully treats illnesses. By rotation, this status is shared.

In order to be effective, preventive service activities must adequately take account of cultural and sociological values and the political/economic structure of the population. Thus, the preventive health program will be based in part on baseline data obtained with respect to these and other characteristics of the population. Further, workers at the health post and health center levels will work closely with local school authorities in carrying out the preventive health program.

In a related development, the MOH and the Peace Corps recently put into operation a pilot preventative health services delivery system. Although the Peace Corps project will not involve Lofa County, it is essential that it be coordinated with the LCRH because of the similarity and objectives of the two projects. In discussions with the Peace Corps it has been agreed that regularized consultation and the sharing of data and information between the two projects will be brought about.

b. Recruitment/Selection of Personnel

In view of the importance of recruiting, selecting and retaining competent personnel to carry out the proposed rural health delivery system, it is essential that appropriate personnel policies be developed. Such policies must facilitate the development of a positive self-paraphysician personnel, on whom the success of the system will in large measure rest.

Perhaps a major contributing factor to this situation is the fact that for the recruitment selection and training of new employees and the upgrading of existing employees, the GOL/MOH uses basically the same system. The premise in both cases is that the individuals require additional training before they can meet the needs of the system. The selection system includes:

(i) advertisement of available openings and minimum skills required;

(ii) selection by a MOH committee set up for the purpose of reviewing candidates; and

(iii) enrollment of the selected candidates in the required training program with the hope that they will graduate.

Unfortunately, this system does not provide much of an added edge to existing employees with experience, or take advantage of this experience. It is expected that the new CSD will develop a better system for addressing this and other problems related to the existing system by appropriately modifying it to provide greater incentives to existing employees--a factor which may contribute to a reduction in the present substantial loss of skilled employees.

c. Training of Personnel

A well-trained staff at all levels is an important element of an integrated, yet decentralized system of health services. Every worker must be competent to perform his responsibilities and must understand how he fits into the system. In this context, the training program for the personnel of the proposed system will include the following types of training programs.

(i) Training of Paramedical Personnel for Health Centers/Posts

An assessment of the health service needs of the rural areas to be served will be completed before training is begun in order to document training requirements. This will be followed by a task analysis to determine what the trainee will be doing upon graduation. Thus, newly recruited paramedics for both health posts and health centers will be trained for their work on the basis of the results of the task analysis, with emphasis on the specified tasks they are to perform. Medical assistants to be assigned primary responsibility for the health centers will be required to perform more complex tasks and, therefore, will require a more specialized curriculum. In this context, it is likely that they will be recruited from the MOH's existing staff. Regarding the training of existing personnel, the program must consider the student's existing skills, based on prior training and experience, in order to avoid wasteful and discouraging retraining for skills already possessed.

By synthesizing data accumulated as a result of a needs assessment and task analysis, and by

taking into account the students' entry-level skills, a precise curriculum emphasizing the primary needs of the rural community can be developed. This will increase the relevance of the training given and will make it more useful in practice. Furthermore, the academic training program can be shortened if the trainee is required to learn only those skills which will be required of him in his job. Training people for nonexistent jobs or jobs which underutilize them is avoided by placing emphasis upon appropriate training. This approach to curriculum development and training encourages emphasis on pragmatic clinical experience which meets identifiable needs.

(ii) Individuals Selected for the Five Health Centers

These workers will be given orientation training in their responsibilities as a group, as well as refresher training in their own professional specialty. Such team training would allow each member to become familiar with the work of other members and the way in which his functions dovetail with those of his team mates.

(iii) Other Training

Specific training programs will be developed for (a) individuals selected for senior positions in the Health Centers, (b) midwives, (c) empirical midwives, (d) an educator trainer, (e) a health educator, and (f) private Liberian physicians. Further detail regarding training requirements is presented in Exhibit I.

The training program, which will include in-country (TNDMA), third-country and U.S. components, will cover all aspects of the system, including, but not limited to preventive, curative and family planning services, supervision, logistics and evaluation. In view of the critical importance of the training component to the success of the program, the design of a systematic, detailed training program will begin upon the arrival of the advisory team. Also, the program design will include the development of curricula, the identification of the numbers and types of personnel to be trained or retrained for the new system, and a determination of where such training will be conducted and the schedule and cost of such training.

It is essential that the training program for paramedics be developed within the context of not only the health conditions, demographic characteristics, economic conditions, etc., in the rural areas, but also the cultural attitudes and beliefs of the rural people. This is especially true with regard to the preventive and family planning elements of the program, which are designed to change people's behavior patterns.

d. Locating Health Facilities

Strategic location of facilities is important in terms of maximizing both cost effectiveness and accessibility. In this context, the following criteria were used in locating health facilities for Lofa County.

(i) Health posts should serve from 4,000 to 6,000 people, depending on the density of the population in the villages and surrounding area. With an estimated population of 175,000, Lofa County would have about 30 peripheral facilities.

(ii) Health posts should be on or near projected road routes, since feeder roads and paths will converge on highways when they are completed.

(iii) Health Centers should be strategically placed with respect to health posts (for which a center serves as a referral facility).

(iv) Insofar as possible, existing structures should be utilized.

At present, Lofa County has two hospitals--a Government hospital at Voinjama and a Mission hospital at Zorzor. The latter has agreed to collaborate with the Government in the LCHH program. In addition to the two hospitals, there are 43 health structures of varying types designated as "clinics". Using the above criteria, 19 of the existing "clinics", which are poorly placed or unsuitable, will be abandoned and 11 new facilities will be constructed. The net result will be the revamping of the 43 existing clinics into 5 health centers and 30 health posts. The specific location of these facilities will be finalized based on information obtained under the baseline data study. A preliminary estimate of their location is contained in Exhibit L.

e. Establishment of the Supervisory System

A supervisory system is needed to provide assistance to Health Post and Health Center personnel and serve as liaison between the Post, the Health Center and the hospitals in Lofa County. To effectively strengthen and improve the quality of service, the supervision should provide advice and support to Health Post staff, both in the provision of clinical services and in the public health education and preventive aspects of their work. It is, therefore, important that visits of supervisory staff to health posts not be limited to the four walls of the Post itself, but be planned to include visits to the villages the Post serves. Further, whenever possible, supervisors visiting Health Posts should be accompanied by the Health Center Sanitarian, who can provide advice and suggestions to Health Post staff regarding sanitation problems in villages and communities.

Also, an important function of the supervisors will be to provide a feedback mechanism to facilitate on-going adjustment of the total program, including the supervisory system (see discussion on evaluation below). Thus, it is contemplated that supervisors from the Health Centers and County Hospitals will meet periodically to exchange views and experiences.

Within the context of the general framework cited above, a systematic supervisory system will be established and in operation within 18 months. The first step in developing the system will involve a systematic analysis of the number of various types of facilities, distances between facilities, transportation difficulties, work loads, worker experience, etc. Based on this analysis, a manual will be developed outlining in detail supervisory policies and procedures which will provide the basis for the supervisory system.

f. Establishment of a Drug and Medical Supply System

One of the most serious problems being encountered under the existing rural health system is the lack of an adequate drug and medical supply distribution system. Major among the problems with the present system are the following. (1) Drug expenditures range from 23 cents per patient in smaller posts to 3 cents per patient in busier posts. (2) Drugs are distributed quarterly (or semi-annually). With inadequate supply, consumption tends to be immediate, rather than spread over the allotment period. This

results in periodic and sometimes protracted shortages, which may add to the risk of illness and in some situations result in alienation of communities from their health workers. (3) There is little or no communication with Health Posts to verify or accommodate sudden or substantial increases in demand for drugs. Large increases in requisitions of certain items are arbitrarily reduced by the Ministry's Drug Section on the presumption of "padding". With scant inquiry into necessity, the practice of padding is encouraged. Similarly, there is little redistribution of drugs from areas of over-supply to areas of shortage. (4) Delivery to health posts tends to be irregular, depending on availability of GSA vehicles. (5) There is lack of control over pilferage and unwarranted withdrawals from stock at several points along the supply route, including the Health Post.

Thus, at an early stage in the project a detailed analysis will be made of these and other problems related to the distribution of drugs and medical supplies. Based on this analysis, an adequate system will be developed and it will be put into operation within 12 months following project initiation.

g. Establishment of a Radio Communications System

In order to improve the level of services provided under the proposed system, i.e., through improved supervision, appropriate handling of emergencies, and improved drug and medical supply distribution, an adequate communication network is essential. Thus, both the NMC and the MOH headquarters in Monrovia have two-way radio communications with Voinjama Hospital and Curran Lutheran Hospital, and through these hospitals to the Health Centers. Installation and maintenance of the system has been arranged through a local private firm, which is providing these services for other similar systems existing in Liberia.

h. Development of an Adequate Records System

The successful operation of an outreach program involving some 37 installations that are providing health services to thousands of individuals each year requires an adequate record and reporting system. Records of each patient are necessary to provide continuity of service to the patient. Reports of services rendered, records of births, deaths, incidence of disease, contraceptive practices, vaccinations, etc. are essential

to planning, proper evaluation, budgeting, and directing and supervising the activities of personnel of the system.

One of the major uses of the records system will be for periodic evaluation of the health delivery system, which will permit appropriate adjustment of the system during the implementation phase, as well as allow for a determination of the replicability of the project in other counties in Liberia.

Thus, a major task will be designing an adequate uniform medical records system and developing and making available all the forms required by the system. It is expected that the system will be completed and in use within 18 months of project initiation.

i. Development of an Evaluation System

Because the proposed project involves, basically, a pilot effort to develop a low-cost rural health delivery system in one county, which can be replicated in other counties, it is essential that an adequate evaluation system be designed. In view of the interdependence of evaluation and the kind of baseline data sought, it is important that these two efforts are appropriately coordinated. The evaluation system will provide for the following activities.

(1) On-Going Evaluation

An especially important element of this aspect of the evaluation system will involve periodic meetings between regional groupings of LCRH workers and PASA team members and their counterparts to ascertain the effectiveness of the various elements of the program and to develop suggestions for changes in the program.

(2) Annual Evaluations

These will facilitate major adjustments in the program to reflect the implications of updated baseline information, as well as feedback from paramedical and other system personnel representatives who may participate in the evaluation.

(3) End-of-Project Evaluation

This major evaluation will be carried out under the direction of outside consultants. The primary

focus of it will be to measure the effectiveness of the overall program, as well as its individual components, in terms of meeting project objectives. Also, it will set the stage for determining if the system should be replicated in other Liberian counties.

(4) Long-Term Evaluation

The impact of the project in terms of its effectiveness in improving the health and welfare of the people of Lofa County will need to be examined. Since this component of the evaluation system will require periodic (e.g. annual or bi-annual) data gathering and analysis over the long-term (10-20 years), it will likely be implemented by the GOL/MOH without donor support. Thus, it will be necessary to design an effective impact analysis system which the GOL can afford and which it has the technical capability to carry out. In this context, it is essential that the GOL/MOH personnel play an active role in designing this impact analysis system. An important first step in the design process is the development for testing of appropriate hypotheses regarding the expected impact of the project. Since these will influence the type of baseline data which is required, they must be developed in tandum with the design of the baseline data study.

j. Project Costs

Two linked issues concerning the GOL's pattern of budgetary assistance to rural health programs deserve mention. The Derryberry Report noted that several existing health facilities charge service fees, but that the disposition of those fees is open to abuse. The Report recommended either the adoption of a standard fee schedule and allocation of fees to health post petty cash reserves, or alternatively the prohibition of service fees at all health facilities and prominent promulgation of this fact.

Under current law, only the Ministry of Finance is permitted to collect funds for services provided by the GOL, and such funds must revert to the Ministry of Finance as general revenue. Thus, collection of fees in accordance with this regulation, except in such cases as the NMC, is impractical. Furthermore, the Ministry of Health feels that service fees may inhibit

timely attention to medical problems, a point that was also mentioned in the Derryberry Report. Accordingly, as a matter of both practicability and policy, no fees of any sort will be permitted in any government health facility except the NMC and notice of this should be displayed prominently in all facilities. At the same time, a mechanism must be established to accommodate unexpected expenses such as repletion of drug supplies which have been used up in minor epidemics, shortage of gasoline for refrigerators and pumps, emergency repairs, etc. This could be accomplished either through the establishment of petty cash accounts at the Health Posts or Health Centers for appropriate drawdown, through the establishment of emergency supplies of certain items at the Health Centers, or, perhaps, by supplying the rural facilities at more frequent intervals.

In a related issue, the GOL/MOH has demonstrated, through its budgetary and expenditure actions over the period 1969 through 1973, that it has been giving increased emphasis to the provision of Rural Health Services. During this period, the MOH Rural Health Budget has grown an average of 6-7% each year. In GOL Fiscal Year 1974 (calendar year 1974) the MOH has responded to the GOL emphasis on Integrated Rural Development by increasing its overall rural health budget by 18%. This increase is to be utilized to retrain and upgrade personnel, provide increased medicines and supplies and assist in the evacuation of needy patients from rural areas to the NMC.

Notwithstanding increased GOL expenditures in the health sector and given the goal of replicability, it is essential that the estimated incremental recurrent cost of the health services proposed for Lofa County, when projected for the country as a whole, not be in excess of planned GOL allocations. However, the present centralized accounting system commingles all recurrent operational costs and, thus, may not permit a realistic estimate of recurrent costs applicable to the project. In order for the GOL/MOH to determine current and future recurrent project costs, a new or modified accounting system identifying project costs on an historical basis may be required.

Therefore, one of the major tasks of the advisory team's initial period will be to work closely with their Liberian counterparts to develop reliable data with respect to estimated recurrent costs. Further, based on an analysis of this revised data, the team

will assist the MOH in making rough projections of the recurrent cost of an expanded system. Should the MOH, based on this analysis, determine that the cost of the proposed system exceeds projected health sector allocations, the team will assist the Ministry in selectively adjusting the proposed system to bring estimated recurrent costs in line with MOH projections of future budgets. Such adjustments, however, will be made within the context of the goal of providing adequate health services to Liberia's rural population.

Although this preliminary focus on estimated recurrent costs is essential in order to provide a realistic test of the replicability of the proposed system, it will be necessary to maintain a continuous focus on this question throughout the life of the project. Therefore, a major element of the annual evaluation exercise will involve an analysis of the recurrent costs associated with the project.

VI. Project Execution

A. Implementation Plan

In view of the complex nature of the proposed rural health delivery system, the fact that it will involve a substantial modification and expansion of the existing system (institution building), and its importance in terms of providing a replicable example for other countries in Liberia and, perhaps, for other countries in Africa, it is essential that the project be implemented on a systematic basis.

Thus, during the first three to six months of the project a detailed implementation plan will be prepared by the GOL/MOH working with the advisory team members. (The actual length of time required to complete the Implementation Plan will be determined by the team). This plan will cover all elements of the ultimate project, including the development and analysis of baseline data, the development of more refined cost data; examination and, perhaps, modification of the training program; determination of the scope of curative, preventive and family planning services; the staffing of facilities; initiating the supervisory system; starting a commodity procurement and supply program; studying the communications system; and initiating the construction program and the evaluation system. By the end of this period, the short through long-term objectives of each individual project element will be clearly identified and approved by all concerned.

In view of its overriding importance regarding decisions concerning the cost of the system, the evaluation of the system, staffing of facilities, the supervisory system, etc., the development and analysis of baseline data will begin immediately with the arrival of the advisory team.

However, it is contemplated that implementation of certain elements can begin prior to the completion of the baseline data collection and analysis or the approval of the over-all implementation plan and, thereby, avoid unnecessary delays. For example, the MOH and the advisory team can begin immediately to develop improved approaches to recruiting, selecting, evaluating and training health personnel; develop the commodity procurement and supply program; arrange for procurement of communications equipment; and begin construction/rehabilitation of health facilities.

With the completion of the gathering and analysis of baseline data a systematic analysis of initial program costs will be completed, and refined cost estimates will be developed for the various elements of the proposed rural health delivery system. Based on these estimates, and to the extent necessary and feasible, adjustments will be made in the system, as jointly agreed upon

by the GOL/MOH and AID, in order to bring its cost in line with GOL budget projections for the health sector.

It should be emphasized that although the collection of baseline data represents an important stage of the development of the project, continuous adjustment of various project elements will likely be necessary, especially during the early years of the project, based on on-going evaluations as well as on the annual evaluations built into the project.

B. Contracting

The Mission recommends that the AID financed advisors to the LCRH be provided under a PASA agreement with the U.S. Public Health Service. USAID/L experience with such arrangements has been good, PASA services are usually less expensive than other technician sources, and, more importantly, USAID/L believes that the U.S. Public Health Service has the greatest extant capacity to provide the type and quality of advisor and consultant required for this project. In addition, going the PASA route may reduce, significantly, the crucial interval between project approval and the delivery of services.

It is contemplated that the PASA team will consider use of technical consultations and support services available under the Health Manpower Development Services program (financed by an existing U.S. Public Health Service Contract with the University of Hawaii) to design and, as desired, implement and evaluate the Medical and Health Assistants development component.

C. Special Conditions Precedent to Disbursement

The following special conditions precedent will be agreed to by the GOL/MOH prior to project initiation.

1. The names of Ministry of Health personnel who are to be appointed to fill counterpart positions to U.S. advisors under the project will be provided prior to project initiation.

2. The appointment of a project coordinator from the MOH will be made prior to the initiation of the project.

3. The GOL will agree to modify the present system of accountability, as appropriate, to identify/segregate project costs. The new or modified system should provide an historical cost basis from which realistic projections can be made on the cost and feasibility of future replications of the project in other Liberian counties.

4. The GOL will give assurances that adequate funds will be budgeted to meet the requirements outlined in the PROP.

D. Implementation Schedule

Action	Agent	Total Time (Mos.)	Time from Start of Project (Mos.)
1. PROP approval	GOL-AID/W	1	S-4
2. Conditions Precedent Met	GOL	1	S-3½
3. Project Agreement signed	GOL/USAID	½	S-3½
4. PASA Agreement signed	AID/W-PASA	½	S-3½
5. Arrival of PASA Team in Liberia	PASA	3	S
6. Project Implementation Plan for all project activities developed and approved	GOL/PASA/ USAID	3	S+3
7. Evaluation and Data Development Plan prepared and approved by SSR/S	GOL/PASA/ USAID	3	S+3
8. Cost Control System developed by cost accountant and approved	GOL/PASA	3	S+3
9. Initiation of Training Program	GOL/PASA	60	S+4
10. Initiation of Construction	GOL	11	S+4
11. Initiation of Vaccination Program	GOL/PASA/ Other Donor	Continuing (2)	S+4
12. Second SSR/S Visit	PASA	1	S+6
13. Initiation of Family Planning Services on a major scale	GOL/PASA	Continuing (4)	S+6
14. Third SSR/S visit	PASA	1	S+10
15. Commodity and Supply System initiated on a major scale	GOL/PASA	Continuing (10)	S+12
16. Fourth SSR/S visit	PASA	1	S+14
17. Supervisory Policy and Procedure Manual approved and put in use.	GOL/PASA/ USAID	Continuing (13)	S+15

D. Implementation Schedule (continued)

Action		Agent	Total Time (Mos.)	Time from Start of Project (Mos.)
18.	New GOL Personnel System initiated	GOL	Continuing (*)	S+18
19.	Fifth SSR/S visit	PASA	1	S+18
20.	Record and Data Reporting System fully functioning	GOL/PASA	Continuing (16)	S+18
21.	Sixth SSR/S visit	GOL/PASA USAID/Other Donor	1	S+22
22.	Seventh SSR/S visit and First Annual Review and PAR	GOL/PASA USAID/Other Donor	1	S+26
23.	Eigth SSR/S visit	PASA	1	S+30
24.	Ninth SSR/S visit	PASA	1	S+34
25.	Tenth SSR/S visit and Second Annual Review and PAR	PASA/GOL USAID/Other Donor	1	S+38
26.	Eleventh SSR/S Visit	PASA	1	S+42
27.	Final SSR/S Visit and Overall Project Evaluation utilizing outside consultant	PASA/GOL USAID/Other Donor	2	S+47

( ) indicates time period for development of activity

(*) dependent on factor outside of LCRH control

EXHIBIT A -- FINANCIAL SUMMARY: TOTAL LCRH COSTS

			Year 1	Year 2 [1]
I.	DRUGS		$ 91,000	$ 97,400
	a. Hospitals [2]	($ 34,500)	($ 35,290)	
	b. Health Centers	(12,000)	(13,200)	
	c. Health Posts	(44,500)	(48,950)	
II.	EQUIPMENT AND SUPPLIES [3]		135,660	46,493 [4]
	a. Hospitals [3]	($ 91,100)	($ 40,000)	
	b. Health Centers	(28,618)	(2,893)	
	c. Health Posts	(15,942)	(3,600)	
III.	VACCINES		43,000	50,000 [5]
IV.	PERSONNEL SERVICES		292,305	321,536 [6]
	a. Hospitals	($ 91,680)	($100,848)	
	b. Health Centers	(81,300)	(89,430)	
	c. Health Posts	(82,800)	(91,080)	
	d. Community Health Insp.	(22,884)	(25,173)	
	e. Ministry of Health	(13,641)	(15,005)	
V.	ADVISORS AND CONSULTANT SERVICES		320,000 [7]	352,000 [6]
VI.	VEHICLES AND MAINTENANCE		113,900	26,840
	a. Hospitals	($ 21,000)	($ 3,300)	
	b. Health Centers	(47,500)	(13,750)	
	c. Ministry of Health	(18,200)	(2,558)	
	d. Advisors	(27,200)	(8,020)	
VII.	CONSTRUCTION AND RENOVATION		148,120	47,180
	a. Health Centers	($ 54,530)	($ 9,380)	
	1. Construct-1	(25,000)	(-0-)	
	2. Renovate-4	(24,000)	(8,000)	
	3. Pit Toilets-10	(4,400)	(1,100)	
	4. Wells-10	(1,120)	(280)	
	b. Health Posts	($ 93,600)	($ 37,800)	
	1. Construct-10	(56,000)	(24,000)	
	2. Renovate-20	(10,000)	(-0-)	
	3. Pit Toilets-60	(22,000)	(11,000)	
	4. Wells-60	(5,600)	(2,800)	
VIII.	TRAINING		141,300	158,100 [8]
	a. Hospitals [2]	($ 20,000)	($ 55,000)	
	1. In-Country	(20,000)	(55,000)	
	2. Out-of-Country	(-0-)	(-0-)	
	b. ENDA	($ 21,200)	($ -0-)	
	1. In-Country	(-0-)	(-0-)	
	2. Out-of-Country	(21,200)	(-0-)	

EXHIBIT A -- FINANCIAL SUMMARY: TOTAL LCRH COSTS (Continued)

				Year 1	Year 2 1/
	c. Health Centers	($ 63,000)	($ 3,000)	$	$
	1. In-Country	21,000	3,000		
	2. Out-of-Country	42,000	-0-		
	d. Health Posts	($ 27,000)	($ 90,000)		
	1. In-Country	102,000	90,000		
	2. Out-of-Country	-0-	-0-		
	e. MOH	($ 10,000)	($ 10,000)		
	1. In-Country	-0-	-0-		
	2. Out-of-Country	10,100	10,100		
IX.	FAMILY PLANNING			140,000 2/	50,000 2/
	a. Contraceptives				
	b. Equipment				
	c. Other Costs				
	d. Transportation				
X.	CURRAN LUTHERAN HOSPITAL			130,000	130,000 10/
	a. Yearly MOH Grant	($ 20,000)	($ 20,000)		
	b. Contributions	110,000	110,000		
XI.	CARE			35,000	15,000
XII.	PROJECT CONTINGENCIES 11/			72,766	60,546
	a. A.I.D.	($ 41,766)	($ 29,546)		
	b. GOL	31,000	31,000		
	TOTALS Years 1 & 2			$1,663,051	$1,355,095
	TOTALS Years 3 & 4			$1,301,670	$1,288,119
	TOTAL PROJECT COST			$5,608,135	

FOOTNOTES

1/ Includes approximate 10% increase in year 2 to cover increased commodity usage and cost inflation. Costs for years 3 & 4 are increased similarly, except where noted otherwise. See Page 19 for a detailed breakout of years 3 and 4.

2/ Does not include funding for Zorzor Hospital, which is listed as separate entry in item X.

EXHIBIT A -- FINANCIAL SUMMARY: Total LCRH Costs (Continued)

FOOTNOTES (continued)

3/ Excludes all aspects of Family Planning, which are listed in Item IX.

4/ Includes approximate 10% increase in year 2 to cover increased commodity usage and inflation costs of expendable commodities, i.e. dressing supplies.

5/ Includes approximately 15% increase in year 2 to cover increased commodity usage and inflation costs.

6/ Includes 10% cost inflation for year 2.

7/ This is an estimated figure, as overhead may vary up to 25% depending upon the source of the services.

8/ Year 2 figure includes training costs of up to 3 additional years, beyond year 2, for certain participants in the hospital category.

9/ This is not a comprehensive cost figure; several items listed above, e.g., item V (Advisors and Consultant Services) VI (Vehicles and Maintenance) and VIII (Training), include family planning elements.

10/ Includes entire budget of Zorzor Hospital, including personnel, drug, equipment and supply costs, except ambulance covered in item VI above.

11/ 5% contingency for U.S.; arbitrary $31,000 for GOL.

EXHIBIT B - DRUGS

Disease	Drugs	Health Post	Health Center	Hospital	Percentage of Population Utilization Yr. 1	Yr. 2	Cost Yr. 1	Yr. 2 - 4
Malaria	Chloroquine Tabs.	10,000	16,000	24,000	30%	40%	$ 3,010	*
	Chloroquine Syrup	20 liters	30 liters	40 liters	20%	30%	4,740	
	Chloroquine Inject.		500 amps	2,000 amps			334	
Ascaris	Piperazine Tabs.	6,000	10,000	16,000	20%	30%	298	
	Piperazine Syrup	6 gal.	10 gal.	16 gal.	20%	30%	1,513	
Hookworm	Tetrachlorethylene	6,000 caps.	6,000 caps.	10,000	20%	30%	1,584	
Schisto	Ambilhar Tabs.		1,000	4,000	20%	30%	954	
Oncho	Banocide Tabs.		2,000	4,000	10%	15%	217	
Dysentery	Iodochlorhydroxyquin	12,000 tabs.	16,000	24,000	20%	30%	3,480	
	Vitamin C. Tabs.	6,000	6,000	12,000			1,210	
Upper Respiratory	Cough Mix	16 gal.	20 gal.	30 gal.	30%	40%	2,318	
Pneumonia	Penicillin Vals	600	1,200	1,800	10%	20%	9,160	
Asthma	Ephedrine Tab.	2,000	2,000	4,000	5%	5%	191	
Tuberculosis	INH - T.B.I. Tabs.	2,000	4,000	10,000	2%	5%	1,080	
	Streptomycin	50 grams	100 grams	200 grams			538	
Gastritis	Antacid Tab.	6,000	6,000	10,000	20%	30%	5,500	
	Sulfoguanidine Tabs.	6,000	6,000	10,000			4,496	
	Paregoric	6 gals.	6 gals.	10 gals.			2,310	
Diarrhea	Bismuth Kaolin	12 gals.	12 gals.	20 gals.	30%	40%	4,620	
Typhoid	Chloramphenicol Caps.		1,000	4,000	1%	2%	450	

*Year 2 through 4 estimated at an annual overall 10% increase; i.e. $97,400 in year 2, $107,140 in year 3 and $117,854 in year 4.

EXHIBIT B - (continued)

Disease	Drugs	Health Post	Health Center	Hospital	Percentage of Population Utilization Yr. 1.	Yr. 2	Cost Yr. 1 Yr. 2 - 4
Constipation	Mg SO4	12 Kg	12 Kg	12 Kg	10%	15%	$ 666 *
V. T. Infection					10%	15%	
V. D. Infection & Stricture	Triple Sulfa	10,000 Tabs.	10,000 Tabs.	20,000 Tabs.	30% 2%	40% 3%	3,016
Heart Disease	Digitoxin Tabs.		1,000	2,000	1%	2%	133
	Diuretic Tabs.		1,000	4,000	10%	15%	810
Hypertension	Reserpine Tabs.	2,000	2,000	6,000	10%	15%	175
Measles Chicken Pox	Calamine Lotion	8 Gal.	8 Gal.	12 Gal.	5%	10%	2,190
Leprosy	Dapsone	1,000 Tabs.	2,000 Tabs.	5,000 Tabs.	2%	3%	106
Scabies	Benzyl Benzoate	4 Gal.	4 Gal.	6 Gal.	10%	15%	1,460
Fungus	Whitfields Oint.	6 lbs.	10 lbs.	18 lbs.	20%	30%	744
Vascular & Trauma	ASA	12,000 Tabs.	20,000 Tabs.	40,000 Tabs.	30%	40%	675
Allergy	Phenergan Tabs.	3,000 Tabs.	3,000 Tabs.	6,000 Tabs.	10%	15%	343
Malnutrition	Vitamin Tabs.	12,000 Tabs.	24,000 Tabs.	36,000 Tabs.	10%	15%	1,600
Anemia	Iron Tabs.	12,000 Tabs.	24,000 Tabs.	36,000 Tabs.	15%	20%	1,677
	Vimeran Syrup	6 Gals.	12 Gals.	12 Gals.	15%	20%	1,200
	Vitamin B Complex	200 Amps.	400 Amps.	600 Amps.	10%	15%	4,300
	Galactose	6,000 Tabs.	6,000 Tabs.	12,000 Tabs.	30%	40%	633
							$61,437
							$30,000
							$91,437
						Rounded off to	$91,000

Drugs, Voinjama Hospital

EXHIBIT C - EQUIPMENT AND SUPPLIES

a) Basic Health Center Equipment (5)

Item	Cost Year 1	Year 2
Health Education Posters	$ 70.00	
Health Education Flashcards	500.00	
Cotton	44.00	$ 44.00
Gauze	250.00	250.00
Bandage	58.00	38.00
Suture	600.00	600.00
Furacin	148.00	148.00
Refrigerator - 8 cu. ft.	1,750.00	
Sterilizers	1,075.00	
Dressing Trays 2 @ .90	9.00	
Trash Cans 3 @ 5.00	75.00	
Haber Filter	250.00	
Filing Cabinet - 4 drawer	750.00	
Desks 3 @ $50.00	750.00	
Chairs 6 @ $10.00	300.00	
Delivery Table	2,500.00	
Artery Forceps 5 @ 2.25	55.00	
Chilleis Forceps 2 @ 4.40	44.00	
Suture Needles	50.00	50.00
Scalpel Handles 3 @ .70	11.00	11.00
Scalpel Blades - Disposable	462.00	462.00
Tongue Depressors (1,000)	33.00	33.00
Giemsa Stain 1,000 cc	43.00	43.00
A F B Stain 4 Liters	55.00	55.00
Sulfamidicylic Acid 200 Grams	14.00	14.00
Acetic Acid 1,000 cc	35.00	35.00
Lens Paper 10 books	20.00	20.00
Applicators	24.00	24.00
Albustix 500	84.00	84.00
Marking Pencil - 1 dozen	15.00	15.00
Xylene 2 Liters	22.00	22.00
Lugol's Iodine 1 Liter	11.00	11.00
Filter Paper 100	88.00	88.00
Blood Lancets 500	131.00	131.00
Clinitest Tablets - 2 x 500	155.00	155.00
Medicine Dropper 10	7.00	7.00
Microscope Slide Labels	98.00	98.00
Test Tubes - 4 dozens	60.00	60.00
Stoppers - 1 doz.	30.00	30.00
Hemoglobin Book - 4	64.00	64.00
(sub-Total)	$10,741.00	$2,612.00

EXHIBIT C - EQUIPMENT AND SUPPLIES (continued)

a) Basic Health Center Equipment (5)

Item	Cost Year 1	Year 2
Hospital Beds 6 @ $150.00	$ 4,500.00	
Mattress 6 @ 50.00	1,500.00	
Kidney Basin 3 @ .90	14.00	
Detecto Scales (Adult)	500.00	
Baby Scales	75.00	
Sponge Bowl 4 @ 5.00	100.00	
Plastic Apron 3 @ 3.00	45.00	
Enema Cans 2 @ 3.50	35.00	
Catheters - Assorted	50.00	
Hypodermic Needles - Assorted	250.00	250.00
Syringes - 2 cc, 5 cc, 10 cc	50.00	
Sphygmomanometer	125.00	
Stethescope	53.00	
Scissors - 2 sizes	100.00	
Thermometers - 4	14.00	
Microscope - Monocular	1,625.00	
Glass Slides 100's	10.00	10.00
Surgeon's Gloves - 1 doz.	21.00	21.00
Hand Centrifuge	100.00	
Pedo Jet Gun	3,000.00 (2 only)	
Dermo Jet Gun	750.00	
Benches 5 each	250.00	
Cupboards 2 @ 50.00	500.00	
O. R. Stools 2 @ 15.00	150.00	
Kerosene Stove	60.00	
Radio Set	4,000.00	
(Total - Health Centers)	$28,618.00	$2,893.00

b) Basic Health Post Equipment (30)

Item	Cost Year 1	Year 2
Health Education Posters	$ 210.00	
Cotton	264.00	264.00
Gauze	1,500.00	1,500.00
Bandage	345.00	345.00
Suture	600.00	600.00
Furacin	891.00	891.00
Sterilizer	6,450.00	
Kerosene Stove	180.00	
Dressing Tray	27.00	
Wash Basin	21.00	
(Sub-Total)	$10,488.00	$3,600.00

EXHIBIT 3 - EQUIPMENT AND SUPPLIES (continued)

b) Basic Health Post Equipment (30)

Item	Cost Year 1	Year 2
Straight Forceps	$ 222.00	
Kidney Basin	27.00	
Bathroom Scales	450.00	
Plastic Apron	90.00	
B. P. Machine	750.00	
Stethoscope	315.00	
Benches 2 each @ 10.00	600.00	
Cupboards	1,500.00	
Trash Can	150.00	
Desk	750.00	
Chairs 2 @ 10.00	600.00	
	$15,942.00	$3,600.00

c) Hospital

Item	Cost Year 1	Year 2
Portable Generator - 3 Kw	$ 2,000.00	
Movie Projector	2,000.00	
Filmstrip Projector	600.00	
Health Movies	1,000.00	
Slide Sets	500.00	
Equipment & Supplies 1/	85,000.00	40,000.00
(Total Hospital)	$91,100.00	$40,000.00
GRAND TOTAL (a, b & c)	133,660.00	$46,000.00 2/
AID financed equipment and supplies	$84,167.00	$40,000.00
GOL financed equipment and supplies	$51,493.00	$6,493.00

1/ Estimated recurring costs for Voinjama Hospital

2/ Recurring costs for years 3 and 4 are $47,142 and $47,856 respectively, assuming an annual 10% cost increase.

EXHIBIT D -- VACCINES

Disease	Vaccine*	Number Doses at Health Center	Number Doses at Hospital	Percentage Population Utilization Year 1	Percentage Population Utilization Year 2	Cost Year 1 - Years 2-4**
TB	BCG	25,000	5,000	40%	60%	3,480
Smalpox	Smallpox	8,334	1,666	50%	70%	1,360
Measles	Measles	12,500	2,500	50%	70%	34,500
Tetanus	Tetanus Toxoid	12,500	2,500	50%	70%	1,800
Diptheria Tetanus Pertussis	DPT	12,500	2,500	20%	30%	2,175
						$43,315
					Rounded to -	$43,000

*Vaccines financed by A.I.D. are smallpox, measles, and Tetanus Toxoid. Vaccines financed by UNICEF are DPT and BCG.

**Vaccines financed by A.I.D. total $37,345 and increase by 10% per year as shown on page 28, except for Year 5 when an arbitrary contribution of $23,000 is provided and the GOL must make alternative arrangements for financing this recurrent cost. The yearly cost of the vaccines financed by UNICEF is shown on page 28.

EXHIBIT 3 - PERSONNEL SERVICES (GOL FINANCED)

(a) Voinjama Hospital

Position Description	No.	Monthly Rate	Annual Expenditure
Doctors/Dentists	3	$860	$30,960
Director of Nurses	1	250	3,000
Admin. Assistant	1	240	2,880
Clerks (Stock/Lab)	3	100	3,600
Nurses	10	120	14,400
Anaesthetist	1	250	3,000
Midwives	4	80	3,840
Empirical Midwives	3	50	1,800
Dressers	6	70	5,040
Nursing Aides	6	60	4,320
Laboratory Technicians	3	130	4,680
Diet Section	4	60	2,880
Laundry	4	55	2,640
Maintenance	12	60	8,640
		(Sub-Total)	$91,680

(b) Health Centers (5)

Medical Assistants	10	$160	$19,200
Health Assistants	5	115	6,900
Nurses	10	120	14,400
Laboratory Technicians	5	140	8,400
Midwives	10	85	10,200
Sanitary/Health Insp.	5	95	5,700
Drivers	5	70	4,200
Admin. Clerks	5	115	6,900
Cleaners	5	45	2,700
Laborers	5	45	2,700
		(Sub-Total)	$81,300

(c) Health Posts (30)

Health Assistants	60	115 (Sub-Total)	$82,800

EXHIBIT E - PERSONNEL SERVICES (Continued)

(c) Community Health Inspectors

Position Description	No.	Monthly Rate		Annual Expenditure
Health Inspector Senior	1	$100		$ 1,200
Health Inspector	9	94		10,152
Field Supervisor	1	150		1,800
Area Supervisor	1	135		1,620
Team Leader	1	66		792
Larviciders	1	50		600
Larviciders	2	40		960
Larviciders	3	32		1,152
Sprayman/Sanitary/Labrs.	4	33		1,584
Recorders	3	84		3,024
			(Sub-Total)	$22,884

(e) Ministry of Health

Administrative Asst.	2	334		8,016
Family Plan Nurse	1	330		3,960
Truck Drivers *	3/4	110		990
Truck Helpers *	3/4	75		675
			(Sub-Total)	$13,641
			(Grand Total a,b,c,d,e)	$292,305**

* MOH costs for the LCRH project are estimated at 3/4 of one driver and one helper per month.

** Personnel Costs cited on page 19 and in Exhibit A start with this basic figure and assume a 10% increase per year, i.e., $321,536 in year 2, $353,690 in year 3, and $389,059 in year 4.

EXHIBIT F -- ADVISORS AND CONSULTANTS

Description	Qualifications	Duration	Cost Year 1 [1]
Health Administrator	MPH, Administration	48 Mo.	$ 78,600
Training Specialist	M.D., W/Admin. Training	48 Mo.	66,700
Family Planning Specialist	MPH, Public Health Nursing	48 Mo.	60,600
Logistics Specialist	B.A. Management Experience in GSA type operations	48 Mo.	60,600
Systems Analyst	B. A. Statistics W/experience	14 Mo. [2]	16,000
	Social Science Research preferably in developing nation.	28 Mo. [3]	17,500
Additional Short-Term Consultant Services	As required	20 Mo.	20,000
			$320,000 [4]

1/ Includes salary, overhead, travel, IHE transportation, housing etc.

2/ Covers field work.

3/ Covers home office work, i.e. no travel, housing, etc.

4/ The Advisor and Consultant costs cited on page 19 and contained in Exhibit A are based on this figure and contain a 10% increase per year, i.e., $352,000 in year 2, $387,200 in year 3 and $425,920 in year 5.

EXHIBIT G -- VEHICLES AND MAINTENANCE

Vehicle	No.	User	Value	Maintenance Gas & Oil Year 1	Total Cost Year 1
Truck	1	MOH	$12,000	$ 1,500	$ 13,500
Field Duty Vehicle	5	H. Centers	35,000	12,500	47,500
Ambulance	2	Hospitals	18,000	3,000	21,000
Sedan	2	Advisors	7,000	1,200	8,200
Field Duty Vehicle*	2	Advisors	14,000	5,000	19,000
Sedan	1	MOH	3,500	1,200	4,700
			$89,500	$24,400**	$113,900

* Field duty vehicles will be required for Family Planning Generalist and the Supply and Logistics Specialist.

** The Maintenance, Gas and Oil costs cited on Page 19 and in Exhibit A use this basic figure increased at a rate of 10% per year, i.e., $26,640 in Year 2, $29,304 in Year 3, and $32,234 in Year 4.

EXHIBIT H -- CONSTRUCTION AND RENOVATION

Type	Number Health Post	Cost/Unit*	Health Centers	Cost/Unit*	Total Cost* Year 1 - Year 2	
New Construction	10	$ 8,000	1	$ 25,000	$81,000	$ 24,000
Year 1 (7)			(1)			
Year 2 (3)			(0)			
Renovations	20	500	4	8,000	34,000	8,000
Year 1 (20)			(3)			
Year 2 (0)			(1)			
Two Seated Pit Toilet	60	550	10	550	26,400	12,100
Year 1 (40)			(8)			
Year 2 (20)			(2)			
Well W/Hand Pump	60	140	10	140	6,720	3,080
Year 1 (40)			(8)			
Year 2 (20)			(2)			
				(Grand Total)	$148,120	$47,180

*Costs are overall estimates subject to individual on-site inspection of existing conditions, e.g., accessibility by road, soil conditions, state of repair, etc.

EXHIBIT I - TRAINING

	Hospital	TNIMA	Health Centers	Health Posts	MOH	Cost In-Country	Mos.	Cost Out-Country	Mos.	Year 1	Year 2	Beyond
Doctor	1					$ 50,000	60			$ 10,000	$ 10,000	$ 30,000
Nurse (R.N.)	2					18,000	36			6,000	12,000	
Physicians	2					1,000	1			1,000		
Health Team Leaders			9					$ 25,000	30	25,000		
Midwives	1		5			6,000	24	17,000	15	20,000	3,000	
Nurse-Midwife Trainer		2						21,200	24	21,000		
Administrator					1			20,200	24	10,100	10,000	
Medical Assistant			6			18,000	72			18,000		
Health Assistant				30		180,000	720			15,000	90,000	75,000
Laboratory Technician			1			6,000	24			3,000	3,000	
Dressers (Retraining)*				13		12,000	78			12,000		
						$291,000		$ 83,400		$141,300	$138,100	$105,000

*If retraining successful, Dressers will become Health Assistants.

EXHIBIT J -- FAMILY PLANNING INPUTS

The following table of Family Planning Inputs of commodities, supplies and equipment is based on the following assumptions:

1. The population of Lofa County is 175,000.

2. The total number of women of reproductive age is 20% of the total population, or 35,000.

3. Female participation in the Family Planning Program will be 50% of all reproductive women by the end of year 2 of the project, or 17,500.

4. The total number of men of reproductive age is 40% of the population, or 70,000

5. Male participation in the Family Planning Program will be 25% of all reproductive males by the end of year 2 of the project, or 17,500.

6. Female acceptors will use the following percentages of Family Planning methods:

   a. Orals 70%
   b. IUDs 15%
   c. Condoms 15%

7. Male acceptors will use approximately 100 condoms/year.

8. Transportation costs of equipment and commodities will be 15% of their purchase price, and the cost will remain relatively constant.

9. Distribution to the ICRH unit will be made as required.

10. Contraceptive use will double in Year 2 of the project and remain relatively constant.

TABLE FOR EXHIBIT J
(Figures rounded in some cases)

Item	Total Project Quantity	Unit Cost	Year 1	Year 2
A. Contraceptives				
Orals	260,400	.13¢/MC	$12,000	$24,000
IUDs	2,325	.36	275	550
Condoms	3,600,000	.02	24,000	48,000
Other Contraceptive Devices and materials, e.g., delfens, diaphragm and jelly, foam, etc.			10,000	20,000
		Subtotal	$46,275	$92,550
B. Equipment (par A.I.D. M.O. 1415.2.1)				
Kit I	30	76.48	$ 2,295	
Kit II	10	128.61	1,286	
Kit IV	2	107.07	215	
Kit V	2	75.17	150	
Kit VI	2	186.99	374	
Other Miscellaneous Equipment			2,000	
		Subtotal	$ 6,320	0
C. Other Costs				
Family Planning Clinic Records Training Materials Visual Aids		Subtotal	$10,000	$10,000
D. Transportation		Subtotal	$ 9,400	$15,400
		Grand Total by utilization 1/	$71,995	$117,950

Grand Total by Expenditure 2/ $140,000 - $50,000

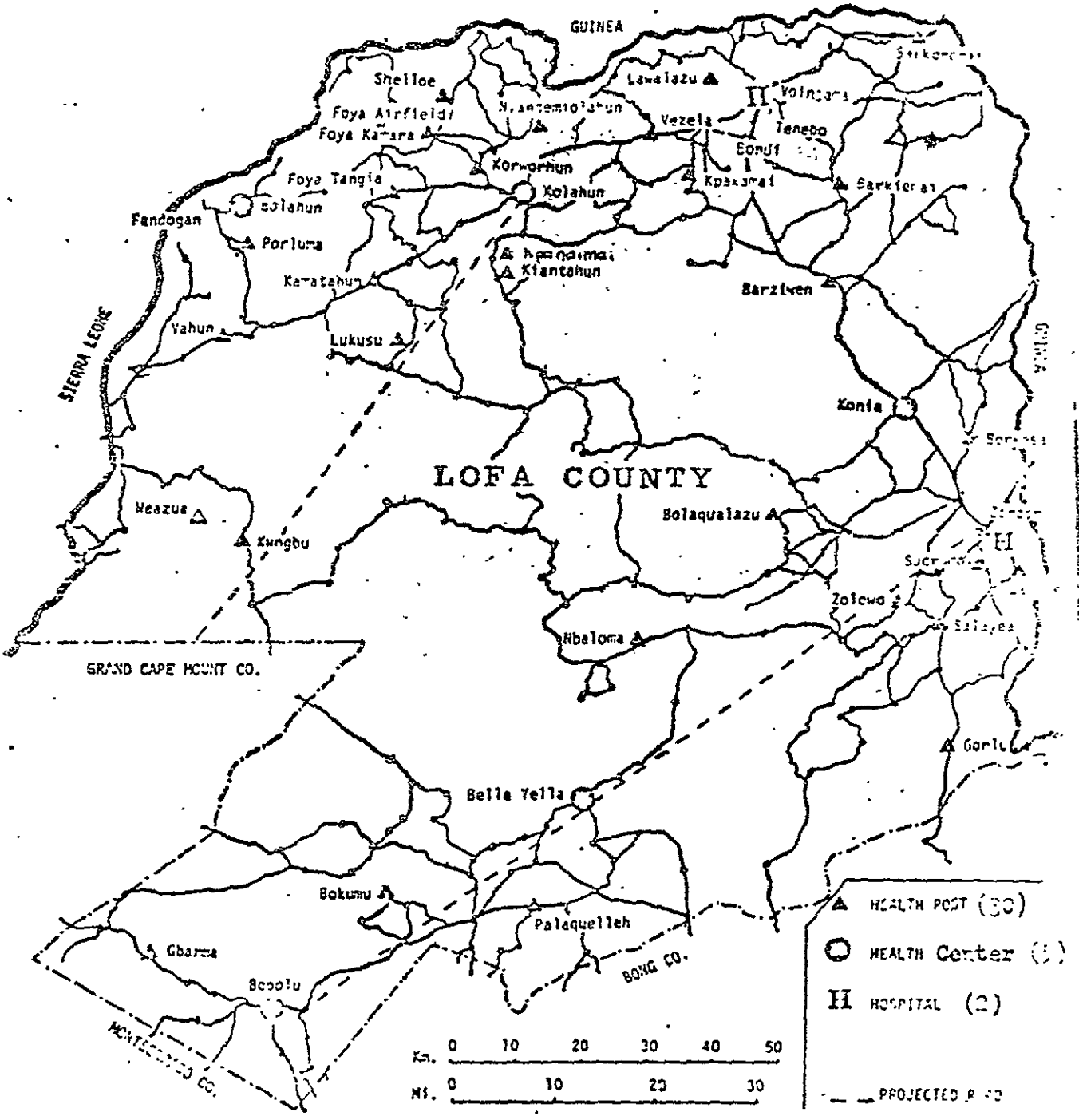
1/ Estimate of the value of Family Planning inputs which will be utilized due to phasing in of commodities and equipment ordered in one year and received in the next, as well as slow acceptance by users. Years 3 and 4 should require outlays of approximately $50,000 and $45,000 respectively.

2/ Obligational total used in Exhibit A and in the Total Financial Inputs Table.

ANNEX K — RELATIONSHIP OF ADVISORS TO PROJECT OUTPUTS

OUTPUTS	ADVISORS
1. Development of an Improved GOL Civil Service System	External AID Financed Project
2. Training of Personnel	COP, T/T, FPS, SLS, and SSR/S
3. Development of a Statistical Reporting System	COP, SLS and SSR/S
4. Institution of a Family Planning Program	COP, FPS and T/T
5. Development of Data Collection System and Implementation of Sample surveys	COP, SSR/S and SLS
6. Development of Supervisory and Policy Manual	COP, SSR/S, FPS, and SLS
7. Immunization Program Implementation	COP, T/T
8. Potable wells and Sanitary latrines	COP
9. Construction and Rehabilitation	COP
10. Communications, Supply and Commodity Transportation Implementation	COP, SLS
11. Development and Implementation of a Project Evaluation System	Entire Team plus GOL and USAID

EXHIBIT L - LOCATION OF LCRH UNITS



Health Posts (30)

Abarma
Lokemu
Paloquelleh
Gorlu
Nbaloma
Zolowo
Salayea
Kpaiyea
Sucromu
Bolagualazu
Kangla
Wenzua
Borkeza
Vahun
Luiromu
Kamatahun
Kiantahun
Barziwen
Porluma
Foya Tangia
Kpatawahun
Kpankamai
Barkiemai
Foya Kamara
Nyandemoilahun
Vezela
Shallee
Lawalazu
Sarkonemai
Kpandimai

Health Centers (5)

Bopolu
Bella Yella
Bolahun
Kolahun
Konia

Hospitals (2)

Zorzor
Voinjama

ANNEX M

ANALYSIS OF LIBERIAN HOSPITAL BEDS BY OWNERSHIP AND COUNTY, 1972

County	Total Beds	Gov't.	Private	% of Gov't. Beds	No. of Hospitals	% of Total Beds
Montserrado	1,241	652	589	52%	13	52
Grand Cape Mount	65	41	24	65%	2	3
Lofa	197	70	127	36%	3	8
Kong	110	26	84	24%	3	5
Grand Bassa	385	305	80	80%	4	16
Nimba	145	28	117	20%	3	6
Sinoe	52	40	12	77%	2	2
Grand Gedeh	10	10	-	100%	1	-
Maryland	174	174	-	100%	2	8
Total	2,379	1,346	1,033	5%	33	100

Source Composite of information in Annual Reports of NPHS, the Ten Year Plan and information on J. F. Kennedy National Medical Center.

AID 1020-2(11-72)

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project
From FY 75 to FY 79
Total U. S Funding 10,596,000
Date Prepared: 10/30/74

Project Title & Number: LCRHP

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes: To make expanded and substantially improved health services more accessible to Liberia's rural population.	Measures of Goal Achievement: Statistically provide basic health services to a greater proportion of the rural population of Lofa County. Statistically valid decreases in morbidity, mortality and fertility rates. Family Planning info and contraceptives available to those of the county requesting it.	Reductions in crude death rate. Reduction in infant mortality rate. Reduction in incidence of debilitating diseases. Reduction in population growth rate through adequate child spacing.	Assumptions for achieving goal targets The GOL/MOH will support program with sufficient resources to test feasibility. Measurement devices of goal achievement can be devised. The availability of better health services will attract patients as an increasing rate during life of project. The acceptance of the services provided by LCRH will enable the residents of Liberia's rural development program and, concomitantly in Liberia's overall economic growth.
Project Purpose: Establish an effective integrated health/family planning delivery system in Lofa County which will provide accessible, improved health services to the people of the county and may be appropriate for replication in other Liberian counties.	Conditions that will indicate purpose has been achieved: End of project status. Integrated health delivery system established with adequate staff to provide preventive, curative and family planning services. Thirty health posts in operation. Five health centers in operation. Two county hospitals effectively responding to needs of centers and posts. The NMC effectively responding to the needs of the county hospitals.	An acceptor rate of 10 to 15% of women at risk. (MOH Reports). Family planning services and commodities will be reaching a majority of women at risk. (MOH Reports). Systematic mass immunizations being carried out against preventable diseases. Preventive and curative services provided throughout the country. TNIMA will be providing relevant up-to-date training. (Contractor Reports). Measured downward trends in present morbidity, mortality, and fertility rates.	Assumptions for achieving purpose: LCRH will provide valid pilot vehicle for testing feasibility of MOH rural health system. Lofa County population will be motivated to utilize outputs of the system. Lofa County families will practice family planning when info and contraceptives are available. The GOL/MOH will provide adequate personnel, finances and support at all levels. TNIMA will train sufficient field staff to adequately staff health posts units and county hospitals.
Outputs. Adequate baseline data. A personnel system with universal job classification description and standards. Uniform medical record system. Records of births, deaths, incidence of disease, contraceptive practices and vaccinations. Comprehensive Family Planning Services. Functional Training Programs. Supervisory policy and procedure manual developed and installed. Systematized immunization program functioning throughout the country.	Magnitude of Outputs: 220 employees under LCRH exclusive of country hospitals. Record and reporting system functional at end of 18 months. Family Planning fully operational within two years of start-up. Completed by end of project. Manual will be in use throughout system within 15 months of start-up. In operation throughout system within one year.	Baseline data periodically reviewed at 4 month intervals by short term consultants. Evaluation system initiated at beginning of project and continually monitored and modified. Contractor Reports MOH Reports JFK Medical Center Reports Observation	Assumptions for achieving outputs. President's announced objectives concerning Family Planning will assure support throughout GOL. Suitable candidates for training will be found and training programs completed. Adequate coordination exercised by and among other GOL Ministries The residents of Lofa County desire the services of LCRH and will respond to them.
Inputs: U.S. - (a) Four full time advisors plus a part time systems analyst on a scheduled basis and additional short-term consultants as required, (b) Participant training in U.S. and third countries, (c) Vaccines, (d) Equipment and supplies. GOL - (a) Counterparts, (b) In-country training, (c) Drugs, (d) Offices and Warehouse, (e) Personnel, (f) Gasoline and oil. Other Donors - (a) Vehicles and maintenance, (b) Well Drilling Rig, (c) Vaccines (d) Construction materials and supervisory assistance in construction.	Implementation Target (Type and Quantity) 1. Health Administrator (Public Health Generalist). 2. Teacher/Trainer as counterpart to Director of the School of Physicians Assistants (TNIMA). 3. Family Planning Generalist 4. Supply and Logistic Specialist 5. Social Science Research/Systems Analyst on scheduled intermittant basis (14 m/m). 6. Short-term consultant(10 m/m). Training- 5 Health Center Team Leaders, 5 Midwives for Health Centers. 2 Nurse Midwife Trainers. 1 Rural Health Prog.	USAID/PASA personnel records and project implementation order documentation GOL budget. GOL consultation with advisors. TNIMA records and observation UN records. USAID training records.	Assumptions for providing inputs: Adherence to implementation plan especially as regards timing. Fuel contribution by other donors. GOL/MOH will provide personnel for training as required. Agreement reached between JFK/NMC and MOH on proper drug purchasing, receiving warehousing and dispatching to Lofa County.

AID 1020-28 (1-72)

PROJECT DESIGN SUMMARY LOGICAL FRAMEWORK

Life of Project:
From FY 75 to FY 79
Total U S Funding $2,586,058
Date Prepared. 10/30/74

Project Title & Number LCRHP

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes	Measures of Goal Achievement:		Assumptions for achieving goal targets: Preventive education programs to make the population aware of nutritional requirements, and simple hygiene, measured through observation, sample surveys and patient records. Revolving of contraceptive supplies./ JFK Medical Center Reports.
Project Purpose:	Conditions that will indicate purpose has been achieved. End of project status. The system capable of providing effective services to Lofa County population 15% 1st year, 35% 2nd year and up to 70% after four years of operation. The MOH is administering and financing the system in Lofa County when foreign assistance terminates.		Assumptions for achieving purpose.
Outputs: Water, latrine facilities for all health posts and centers (two wells and two latrines for each). Communication, supply and transportation network designed and implemented.	Magnitude of Outputs: 20 health posts and 4 health centers, water and latrine facilities by end of 1st year and remaining ten posts and 1 center within 18 months of project start-up. 5 radios for health centers. 2 radios for county hospitals. 1 radio for NMC 1 radio for MOH 2 ambulances. 5 vehicles for health centers. 4 vehicles for Project Advisors.		Assumptions for achieving outputs:
Inputs.	Implementation Target (Type and Quantity)		Assumptions for providing inputs:

ANNEX C -- HOW THE PROJECT BENEFITS WOMEN

The LCRH provides to women the normal patient benefits which accrue from health programs which emphasize family planning, as well as non-patient opportunities for career development, both within and without the direct scope of the project.

A. Patient Benefits:

Because of their biological role, women, generally, are more susceptible to the need for medical assistance. Childbirth, the complications which often surround pregnancy and childbirth, child rearing through the most vulnerable years, and the all too rapid repetition of the process sap the natural strength, vitality and resistence to disease of rural Liberian women at a rate far exceeding that of Liberian men and make her a more needy recipient of the services the LCRH can provide. In addition to family planning information and commodity assistance, services available to her will include health and sanitary education, nutrition education, immunizations for her and her children, and curative medical assistance.

In a sort of role reversal, the rural Liberian woman also will be a major positive spokesperson for the project, i.e., the very benefits she obtains from her more frequent visits to the units of the LCRH will make her, hopefully, a leading change agent within her family and community. If she learns to appreciate the benefits of basic sanitary facilities, as well as adopt new practices which enable her to carry out her traditional functions in a more efficient and healthful manner, it is hoped that she will pass this information on to her friends and neighbors and raise the standard of expectation

throughout the community, e.g., the village may be motivated to install sanitary latrines, improved water wells, or any of a variety of desirable health measures.

b. Non-Patient Benefits:

The project calls for increased numbers of skilled paramedical personnel. Many of these jobs will be filled by women. Candidates for training as nurses, Medical Assistants, Midwives, as well as the whole gamut of paramedical and medical personnel will be required, and women will have an opportunity to apply. In rural Liberia women assume many of the traditional and, sometimes, low level roles of West African women, but women have been able to break out of these roles in the less rural areas. The President's has a daughter who is a Medical Doctor, the Director of the School of Physician Assistants at [redacted] happens to be a woman, and women judges, representatives, and high government officials are not rare. Additionally, the "market mamays" provide a significant source of retail marketing of local produce.

The LCRH assists women by enhancing their ability to pursue careers and by providing job opportunities. Coincident with the project, the expected rise in living standard expectations may generate the educational and other opportunities upon which women need to capitalize in order to improve their status in Liberian society.