REBUILDING LIBERIA'S HEALTH SECTOR

Analysis, Strategies, and Recommendations

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EXECUTIVE SUMMARY

Purpose

This report assesses the current (April/May 1998) state of the health sector in Liberia in order to provide recommendations to USAID Liberia for strategic and programmatic choices for short and medium term activities in health sector programming.

Design and Methods

The process began with the drafting of a scope of work in February/March 1998 by the USAID Liberia staff in participation with a representative from USAID/AFR/SD and the HIV/AIDS regional advisor. The intent was to develop a framework within which a cross cutting assessment of the health sector could be conducted and that produced practical and focussed recommendations while addressing the manageable interest of the Mission.

Field visits and interviews of health care providers at every level were conducted in five counties in urban and rural areas of the country. The Ministry of Health and Social Welfare cooperated at the highest level and accompanied the assessment team on many of its visits. Representatives of all major donors and international NGOs were interviewed and consulted regarding their experiences and lessons learned. At the end of the field visits, the team came back together to develop recommendations and identify possible activities for the mission.

Recommendations

Through field observations and discussions with health care providers, community leaders and MOH&SW officials, the health assessment team has become convinced that a package of carefully focussed "transition" activities will effect a significant impact on health care in Liberia.

The MOH&SW is placing a high priority on addressing urgent health problems that were exacerbated by the war. It also recognizes that it has not had access to new health information and strategies that have become available over the past seven to eight years and they are anxious to "catch-up." Both of these focuses offer opportunities for donor assistance.

There is general agreement that Liberia is in a transition stage and that peace is still fragile. At the same time, the Government of Liberia and its people are anxious to move forward with strategic planning and institutional development. With this in mind, USAID should consider activities that can produce short-term impact but also start building a foundation.

Activities with Impact in the Short Term:

- Expand access to primary health care services
- Update service provider knowledge in family planning, STD/RTI/HIV prevention and other areas of reproductive health service delivery
- Increase the availability of Emergency Obstetric Care
- Increase the availability of condoms for STD/HIV prevention and family planning

Activities with Impact in the Medium Term (Two to Three Years):

- Strengthen national health program policies and service delivery guidelines
- Capacity building and strengthening of county health teams
- Strengthen pre- and in-service training
- Increase community involvement in health care
- Increase knowledge and use of STD/RTI and HIV/AIDS prevention measures
- Strengthen local NGOs

Activities with Impact for the Long Term (Two to Five Years):

- Implement cost recovery schemes
- Expand services in underserved areas

ACRONYMS

AFR/SD	Bureau for Africa, Office of Sustainable Development
ANC	Antenatal Care
ARI	Acute Respiratory Infection
CAD	Children's Aid Direct
CDC	Centers for Disease Control and Prevention
CDD	Control of Diarrheal Diseases
CHAL	Christian Health Association of Liberia
CHT	County Health Team
CHW	Community Health Worker
CM	Certified Midwife
CRS	Catholic Relief Services
DPMA	Depo-Provera
EDL	Essential Drug List
EPI	Expanded Program on Immunization
EU	European Union
FFP	Food for Peace
FFS	Fee for Service
FP	Family Planning
FPAL	Family Planning Association of Liberia
GOL	Government of Liberia
HIS	Health Information System
HIV	Human Immunodeficiency Virus
IDP	Internally Displaced Person
IEC	Information, Education and Communication
IMCI	Integrated Management of Childhood Illness
INGO	International Non-Governmental Organization
IPPF	International Planned Parenthood Federation
IRC	International Rescue Committee
LWS	Lutheran World Services
MCH	Maternal and Child Health
MERCI	Medical Emergency Relief Cooperative International
MERLIN	Medical Emergency Relief International
MDM	Medecins du Monde
MOH&SW	Ministry of Health and Social Welfare
MOU	Memorandum of Understanding
MSF	Medecins Sans Frontieres
NACP	National Aids Control Program
NID	National Immunization Day
NDS	National Drug Service
NGO	Non-Governmental Organization
OFDA	Office of U.S. Foreign Disaster Assistance
PA	Physician Assistant
PHC	Primary Health Care

PNC	Postnatal Care
PSI	Population Services International
RDF	Revolving Drug Fund
REDSO/WCA	Regional Economic Development Services Office/West and Coastal Africa
STD/RTI	Sexually Transmitted Disease/ Reproductive Tract Infection
STD/STI	Sexually Transmitted Disease/Infection
TBA/TTM	Traditional Birth Attendant/Trained Traditional Midwife
TT	Tetanus Toxoid
TNIMA	Tubman National Institute for Medical Arts
UNDP	United Nations Development Programs
UNFPA	United Nations Family Planning Association
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
WHO	World Health Organization

INTRODUCTION

Scope of Work

This assessment was undertaken to provide an up-to-date analysis of the state of the health sector in Liberia after almost a year of "peace." A more specific goal was to provide strategic and programmatic recommendations to assist USAID Liberia in developing a viable health strategy for the country's transition from relief to development (the next two to three years).

Methodology

The health assessment team consisted of specialists in the areas of policy and finance, pharmaceuticals, training, reproductive health, and water and sanitation. The team spent three weeks in Liberia, meeting with staff of the Ministry of Health and Social Welfare (MOH&SW) and leading international partners in the health field, and conducting field visits in five geographically and population diverse counties (Montserrado, Grand Bassa, Bong, Nimba, and Lofa). During the visits to field sites, the members of the county health teams, representatives of international non-govnermental organiations (INGOs) supporting health activities, health care providers in rural clinics and hospitals, and community leaders were interviewed. Most of Liberia's health training institutions were visited and evaluated in terms of their short-term ability to reactivate training, even on a limited basis. Curricula and training materials still in existence were reviewed. The team reviewed any existing copies of national health policies and guidelines.

The team was unable to visit the southeast due to the poor condition of the roads and bridges (destroyed during the war and/or washed out because of the rainy season). However, they did speak with representatives of the on-site INGOs, government officials, and other donors about the number of returnees, infrastructure, rehabilitation of health facilities, and the health status of the communities. It should be noted that according to the most reliable information gathered, most of the population has not returned (figures vary anywhere from 35,000 to 100,000 versus pre-war census figures of 295,000), and most of the former health facilities have been destroyed and remain non-operational.

Environment

The health assessment team has determined from its field observations and discussions with health care providers, community leaders, and MOH&SW officials that a package of carefully focussed "transition" activities will effect a significant impact on health care in Liberia. There is a genuine opportunity to capitalize on a situation that does not often exist in developing countries. Liberia has a small core of trained providers at every level who are proud of what they had accomplished before the war as well as a Ministry of Health that had endorsed important health reform concepts (decentralization, revolving drug fund, fee for service) as early as 1986 and, most recently, has formulated a comprehensive action plan (December 1997) to revitalize the health sector. In addition, there are a number of donors who also recognize this unique opportunity and are actively pursuing joint participation and coordination to achieve results in the most cost-effective manner. USAID Liberia can do much to support the redevelopment process by utilizing its proven technical expertise in capacity building, policy development, and training.

An example of the level of commitment that exists for restoring primary health care services by the

communities and the potential for support flowing between the ministry and the county health facilities can be seen at Curran Hospital Center (Lofa County), which was burned to the ground during the war. Before the war, Curran Hospital had an excellent community health department, a school for midwifery, practical nurses and lab assistants and a hospital that had a strong emphasis on maternal and child health. The community health department personnel were also responsible for supervision of MOH&SW clinics in three districts of Lofa County.

The surrounding community groups came together as a team to salvage what remained of the structure for future use, to cut down the overgrowth around the remains of the facility, and to help rebuild the community health center and the delivery room facility. During a tour of the center, the health assessment team met three health care workers who had hiked 11 hours one way into the bush carrying EPI vaccines and other supplies to reach two clinics that had been cut off during most of the war. The minister of health, who accompanied the assessment team on its visit to Curran, was so impressed by these efforts that upon his return to Monrovia, he allocated funds, recently received from the Taiwanese government, to help rebuild one wing of the hospital, thereby showing his good faith response to the demonstrated commitment of the community.

Before 1990, Liberia had focussed on curative and tertiary health care that had an urban bias. However, just before the war, there were signs that the MOH&SW had begun dealing with the twin issues of decentralization and provision of primary health care (PHC) services. It had acknowledged that it needed to move from the curative to the preventive and that it needed to empower its county health teams. In that regard, and in conjunction with a USAID-funded activity, the Southeast Region Primary Health Care project, a set of decentralization guidelines were developed that are currently serving as the basis for restructuring and strengthening the county health team system.

Another indication of the supportive environment for health sector assistance is the high priority that the MOH&SW is placing on addressing urgent health problems exacerbated by the war: tuberculosis, STDs and HIV/AIDS, maternal mortality, cholera and other epidemic diseases, and vaccine-preventable diseases. The MOH&SW also recognizes that it has not had access to new health information and strategies that have become available over the past seven to eight years and they are anxious to "catch-up." Both of these focuses offer opportunities for donor assistance.

Critical Assumptions and Parameters

The team was asked to develop its recommendations based on realistic assumptions about Liberia's passage from war to peace and the concomitant transition from relief to development, and, to craft its recommendations to optimize the impact of any USAID assistance. Accordingly, the team addressed this mandate by developing a set of critical assumptions and a set of parameters that considered the resources available to the Government of Liberia (GOL) and USAID and identified attributes of activities that would have the most impact for the largest number of people.

Critical Assumptions:

1. Peace prevails;
2. Ownership and commitment demonstrated by the GOL:
   - Execution of an accord by all responsible ministries of government, whether in the form of a bi-lateral agreement or a MOU, that articulates the goals and activities to be mutually supported by the GOL and USAID;
   - Phased in payment of incentives for clinic personnel by the MOH&SW (this appears to be in progress); and
   - An increasing scale of resources provided by the GOL to county health teams, clinics, and referral hospitals either in kind or through actual cash injection;
3. The National Drug Service (NDS) retains NGO status;
4. EPI, disease surveillance, and epidemic preparedness are supported by WHO and UNICEF;
5. The management burden for USAID Liberia is commensurate with its expected staffing pattern.

Parameters:

1. Encompasses a two to three year time line for initial activities;
2. Supports a $3 million annual budget;
3. Is cost effective;
4. Offers geographical balance vis a vis other donor efforts;
5. Supports integrated health services;
6. Provides services where refugees and internally displaced persons (IDPs) are returning;
7. Supports decentralization;
8. Encourages public private partnership;
9. Contributes to sustainability;
10. Builds on prior USAID investment;
11. Incorporates donor coordination (synergy and logical relationship of activities);
12. Leverages funds from other donors.

Sector Analysis

Each member of the health assessment team was chosen for his her expertise in a particular area that USAID Liberia had determined would be germane to its goal of identifying practical, appropriate, and focussed health activities. Accordingly, the assessment is not a catalogue of all possible interventions in the health sector. The individual assessments of the team members were edited and integrated in the main body of this report. Unedited versions for each field of expertise have been attached as appendices.

DECENTRALIZATION AND HEALTH CARE REFORM

Environment

A National Planning Conference was held in November 1997 to act upon a WHO assessment of the status of health services in Liberia. Participants at this conference included the Ministry of Health and Social Welfare (MOH&SW), the acting minister of planning and economic affairs, major bilateral donors (USAID, GTZ, EU), United Nations Agencies (UNDP, UNFPA, UNICEF,

WHO), international and national NGOs, representatives from health professions and woman's organizations, and staff from the GOL ministries that have a sectoral interest in health. As result of the five-day conference, a two-year national "Action Plan for Revitalizing the Health Sector" was developed.

Five critical issues were identified as immediate challenges to reforming the health sector: 1) reversing sector bias; 2) enhancing financial support, in conjunction with the Government of Liberia, fee for service (FFS) and revolving drug fund mechanisms (RDF), and national health insurance plans; 3) retaining and redeployment of health workers; 4) strengthening supervision at lower levels; and 5) ensuring the availability of drugs and essential supplies.

The action plan proposes tandem movement on two fronts: the revitalization of the health delivery system, and sectoral reforms and strategies to institute effective policies. There is recognition that training and capacity building will be necessary from the clinic level right up to the ministry level to achieve success. The action plan has also identified nine priority health programs:

- Restoring hospitals, health centers, clinics, and health posts to full functionality;
- Developing and strengthening of reproductive health services including training of traditional birth attendants (TBAs);
- Developing and strengthening of child health services;
- Revitalizing nutrition services;
- Revitalizing disease control programs;
- Developing appropriate management support systems;
- Revitalizing the health information system;
- Developing and revitalizing social welfare services for orphaned and street children and the disabled;
- Improving water and sanitation.

The existence of this well organized action plan is particularly encouraging as it reflects participation by all partners in the health sector. The test, of course, is how it will be used as a tool and whether it will remain dynamic and organic.

Decentralization

Strengthening health systems through decentralization is an important element in government reform but it requires careful execution and monitoring. The desired effects of decentralization include improving the delivery of primary health care, empowering local communities and improving efficiency, management and responsiveness of government health services.

Decentralization of the health sector in Liberia is incomplete. However, a firm foundation is being laid. County health teams (CHTs) for all 13 counties have been constituted, named and assigned. The county health team is comprised of a county health officer (a medical doctor), a health services administrator, a public health officer, a finance officer, a logistics officer, and a personnel officer. There are also associate members, including community leaders and NGO representatives. A

national orientation workshop was held by the MOH&SW in March 1998 to discuss the roles and functions of the county health team, to improve coordination at the county level, and to provide support for preparing technical action plans for each county.

Unlike many other areas, where policies and guidelines have either not been formulated or no longer exist because of looting and destruction during the war, decentralization guidelines remain. They were actually developed in 1986 under the auspices of a USAID activity, the Southeast Region Primary Health Care Project. The MOH&SW has formally committed to decentralization as part of its December 1997 Action Plan, which states: "Key to these strategies will be the reorganization of the central level of the Ministry of Health and Social Welfare so that its mandate is limited to policy formulation, program management, monitoring, and evaluation. Matters of planning, implementation, and management of resources are to be decentralized to strengthen county health offices."

There appears to be a supportive conceptual environment for decentralization, however, it will be important to build capacity both at the central and county level. From the ministerial to the county health team level, there must be a clear understanding of the responsibilities and benefits that decentralization brings. In addition, the guidelines will need to be updated and rewritten to reflect the current environment.

Health Care Reform

Drugs are currently dispensed free of charge to all patients at MOH&SW facilities. However, all patients pay a fee for each clinic visit of at least L$5 for a child and L$10 for an adult. In addition, pregnant patients are charged a one-time fee of L$50. Some non-public facilities charge higher fees. At most government health facilities, 70 percent of the fees collected is paid to staff as an incentive to supplement low government salaries. The remaining 30 percent is shared between the facility and the county health team. In facilities that are supported through OFDA or other donor grants and managed by INGOs, any shortfall in staff incentives is subsidized by the donors. Currently, the GOL, in consultation with major donors, is preparing a plan whereby it would gradually assume the payment of these incentives. In addition, at the recent orientation workshop for county health teams, one of the recommendations was to investigate how to best utilize fee-for-service income to meet the needs of the counties.

Health care personnel and members of the community acknowledge that fee-for-service is necessary and the amount charged should be increased in order to help achieve better health care. There was no consensus of how much should be charged, whether there should be exemptions for the poorest of the poor, or when fees for drugs should be instituted. Most people agreed that at least two growing seasons would be needed before service fees should be increased since most of the population currently have little monthly income to pay for health services. However, there is anecdotal evidence that some people are paying higher fees for health care at private facilities and even paying for their drugs at private pharmacies. It is hard to determine if this information is accurate and, if so, how many people are able to meet the higher cost.

Although governments often acknowledge the critical need for increased funding of health care, it

is difficult for them to commit to funding unless they can be persuaded that it is a good investment rather than an unending outlay of scarce resources. The FY 1998 total health budget for Liberia is US$2.3 million out of a total national budget of US$41 million. Thus, the health sector receives approximately 5 percent of the national budget. Although at first blush this does not appear to be substantial, when viewed in terms of other West African countries (2.5 to 3 percent), it is quite respectable, especially when one considers that the only line items that are greater in the national budget are defense and education.

A revolving drug fund was operated before the war, but the MOH&SW does not currently operate one. However, it believes that the Bamako Initiative should be implemented at some point when the returning population would be able to pay some part of the drug costs. The draft National Drug Policy proposes to establish a revolving drug fund under the supervision of the National Drug Service (NDS) and the Christian Health Association of Liberia (CHAL) with community involvement and support from the MOH&SW, NDS, and CHAL are discussed in more detail in the pharmaceutical section.

CAPACITY BUILDING, TRAINING, AND EDUCATION

National Policies/Guidelines

There is an urgent need for national policy and service delivery guidelines to lead the revitalization of primary health care services. Prior to the war, Liberia had national policies for population, STDs/HIV/AIDS, EPI, control of diarrheal diseases, and malaria. There are no official policies for family planning, safe motherhood, acute respiratory infections, and drugs, although some of these are in development. Service delivery guidelines appear limited to drug treatment protocols that were formulated by NDS in May 1993 in collaboration with MOH&SW, donors, and NGOs.

Where policies existed prior to the war, they would benefit from review and revision in order to reflect changes in international knowledge and practice. For those areas where policies did not exist, the process of developing them will help define activities and priorities for the MOH&SW. Service delivery guidelines for all health interventions should also be developed. The development and/or updating of policies and guidelines would also serve as a positive step to strengthening the capacity of MOH&SW senior managers in those technical and programmatic areas.

Training

Liberia is facing a shortage of trained middle and upper level health personnel in the public sector. During the civil war, some health workers became casualties of the conflict while others, particularly the most skilled and most senior, left the country. Pre-service and in-service training programs were shut down, and curricula, textbooks, and training equipment were looted or destroyed. Uniformly, MOH&SW staff, health care providers and administrators, donors and representatives of INGOs all voiced the urgent need to build capacity and to restore both quantity and quality of health personnel. Presently, in all of Liberia, there are only 37 doctors, 128 physician assistants, 86 registered nurses, 72 practical nurses (LPNs), approximately 300 TBAs (also known as trained traditional midwives or TTMs), 170 nurse's aides, 124 health inspectors and 58 laboratory technicians in government-supported health facilities (Personnel Division, MOH&SW).

To adequately support primary health care services, the critical cadres of staff are physician assistants (PAs), registered nurses (RNs), certified midwives (CMs) and trained traditional midwives (TTMs). In the past, most of these personnel were trained at a number of institutions: Tubman National Institute of Medical Arts (TNIMA) in Monrovia; Cuttington College, and Phebe Hospital and School of Nursing in Bong County; Ganta Hospital in Nimba County; Curran Hospital in Lofa County; and the Southeastern Region Midwifery Training Center in Grand Gedeh County. The rural regional (i.e., non-Monrovia) institutions were considered particularly valuable as they attracted local students who were more likely to stay and work in the region after graduation.

The only one of these training institutions that is currently operating is TNIMA and it is only offering courses for registered nurses, certified midwives, and physician assistants. Curran Hospital and the Southeastern Midwifery Training Center were completely destroyed and the others are in various stages of planning for restoration of services and training programs. All of these institutions need assistance in replacing reference materials, teaching aids, and anatomical teaching models.

Most of these training programs are understaffed and are having difficulty attracting and retaining qualified instructors since they are unable to offer competitive salaries and benefits. To insure adequate clinical practice for students, those sites that previously hosted clinical teaching will also need to be evaluated and revitalized. Where that is not feasible, other sites should be selected. For example, the JFK Medical Center, which served as the clinical training site for TNIMA, is not currently functioning at a level that supports this activity.

TTMs are trained at the community-level by clinic and community health department staff. The MOH&SW and INGOs have revitalized this training in some areas. Community health workers (CHW) were utilized prior to the war but the program had only been implemented in some areas of the country. If the CHW program were re-introduced, it would provide important support to primary health care education and services.

Almost all copies of the curricula for basic health training programs were looted during the war. For some programs, only one copy still exists in the country and it is a 1986/87 version. Curricula for the CM, RN, and PA courses were revised in 1995 but lost before they could be printed and distributed. Refresher, or in-service, training curricula that existed for TTMs and CMs are now being revised. Topic-specific refresher modules for various personnel have been created as needed (i.e., the National AIDS Control Program (NACP) has developed a training program on syndromic diagnosis of STDs/STIs. There does not appear to be a standardized national program of in-service training.

A thorough review of the training curricula and accompanying materials for each health-training program should be conducted and revisions made as necessary. The development of national policies and service delivery guidelines will facilitate this process. A review of available copies of basic and refresher curricula revealed that they utilized adult learning theory and a participatory approach to training, were competency-based, and incorporated job descriptions for program graduates. Many PHC topics were well covered, but some areas such as family planning, sexually transmitted diseases and reproductive tract infections (STDs/RTIs), and HIV/AIDS, need substantial revision to reflect advances in the field over the past 10 years. Instructors have also expressed the need for skill strengthening in the latest health information and training methodologies.

While this review and revision of national curricula is being undertaken, it would be important to simultaneously hold "update" meetings workshops for in various topics (family planning, HIV/AIDS, etc.) in order to get current information into the hands of service providers and managers as soon as possible. This could be accomplished using international standard reference and training materials.

Information Education and Communication (IEC)

As with training, IEC activities will be facilitated by having national standardized policies and guidelines. IEC materials for all health programs are almost completely non-existent and there is not sufficient budget or trained personnel to design and print new materials, buy radio-time, etc. The IEC Division of the MOH&SW previously coordinated the development and production of all health IEC materials for the country in order to insure standardization of messages. However, the division currently lacks the resources to resume that role. MOH&SW officials stressed the need for IEC activities and materials at all levels. They also noted the need to reach rural audiences with messages in local languages and for non-literate persons as well as to explore the potential use of rural radio as a message medium. UNFPA, the National AIDS Control Program, and UNICEF hope to assist with the development of national IEC materials for family planning, STD and HIV/AIDS prevention, and safe motherhood, and to print and disseminate them to the extent that their budgets allows.

REPRODUCTIVE AND CHILD HEALTH

Liberia began to institute integrated primary health care in clinical and community services prior to the war in order to reverse a previous bias toward curative and urban-based care. As noted above, the MOH&SW is committed to revitalizing this effort and prioritizing primary health care. Two of the key areas that the MOH&SW has specifically highlighted in their action plan are reproductive health and child health.

Family planning

Although GOL support for family planning (FP) existed before the war, services, especially through the public sector, were limited and utilization was low. The 1986 DHS showed an estimated 72 percent understanding of family planning among married women of reproductive age, yet contraceptive prevalence for modern methods was only 7 percent and total fertility was high at

6.5. The majority of clinic-based services for temporary contraception were provided through the Family Planning Association of Liberia (FPAL), which had 5 clinics and 42 outlets operating in 10 counties. FPAL had also integrated FP services into four MOH&SW clinics just prior to the war. Permanent contraception was only available at a few large hospitals. Some of these services were also available through private practitioners in urban areas. Community-based distribution of oral contraceptive pills (OCP), condoms, and vaginal foaming tablets had been initiated in Monrovia through FPAL. Since 1990, virtually the only source of FP services in Liberia has been FPAL's Monrovia clinic, which restarted operations in 1994. However, a number of international NGOs, who are providing support to revitalize MOH&SW clinics in rural areas, are now also beginning to integrate FP services.

Health workers and MOH&SW staff interviewed during the assessment expressed the belief that there has been a significant increase in demand for FP services and that there is a strong opportunity to increase the use of family planning in Liberia. Clinics are experiencing regular requests for FP services but are constrained by the limited supply of contraceptives. FPAL offers condoms, oral contraceptives, vaginal foaming tablets, IUDs, and injectable contraceptives, which are supplied in limited quantities from IPPF, UNFPA, and the National AIDS Control Program. There appears to be an opportunity for a revitalized community-based distribution program working through TTMs and CHWs. In addition, social marketing shows promise as an additional channel of contraceptive supply. As part of a comprehensive activity to revitalize reproductive health services in Liberia over the next 15 months, UNFPA has agreed to provide a two-year national supply of OCP, condoms, DMPA, IUDs, and vaginal foaming tablets to be distributed via the National Drug Service.

Liberia has a National Population Commission and a population policy but the assessment team was not able to obtain a copy for review. The country does not have a specific family planning policy, nor are there national guidelines for family planning service delivery. As noted earlier, training, both basic and in-service, needs to be strengthened and contraceptive technology updates provided to all service providers and managers. UNFPA is planning to provide in-service training in reproductive health, including counseling, contraceptive technology, and infection prevention for TTMs, nurses, and midwives in five counties (Grand Bassa, Nimba, Margibi, Cape Mount, and River Cess).

The war has highlighted several areas that need special attention. There has been an alarming rise in teen pregnancy and there is a need to reach adolescents with family planning messages and services. UNFPA is supporting the reactivation of family life education in schools and FPAL hopes to reactivate their peer educator and service delivery program for in and out of school youth. Information about and access to emergency contraception was also emphasized as a priority, especially in light of continued social upheaval and the vulnerability of many women to sexual abuse and violence.

STDs/RTIs and HIV/AIDS
This area was consistently mentioned by health workers, MOH&SW staff, and INGOs as a major concern for the country and a priority for donor support. As of December 1997, there were 315 HIV positive and 70 confirmed AIDS cases reported to the National AIDS Control Program. The NACP believes that these numbers represent only a small fraction of true infections in the country, particularly as the war has created a ripe environment for the spread of STDs and HIV/AIDS. Large segments of the population have been displaced, both within Liberia and to neighboring countries; women have become more vulnerable to sexual violence and abuse; fighting forces have been moved around the country and across borders, creating the potential for high-risk behavior; and preventive and curative health care for STDs/RTIs has been virtually non-existent.

Trends in HIV seroprevalence show a steady rise from 3.9 percent in 1994 to 6.2 percent in 1997, with consistently higher rates for women and rising prevalence in rural areas. AIDS cases are almost equally divided between men and women, but it is notable that the mean age of the women is consistently lower than that of men. There are no recent figures on STD/RTI prevalence, but health workers around the country report an increase in female and male clients who reported either a history of STDs/RTIs or have current complaints.

There is a National AIDS Control Program (NACP) that is responsible for IEC, STD/HIV/AIDS epidemiological surveillance, blood safety, STD management, and counseling and care of persons with AIDS. Funding for current NACP activities is provided through the UNAIDS Theme Group, the European Union and a small contribution from the MOH&SW. However, the program is under-funded. The national policy guidelines include provisions for testing, counseling, education, surveillance, and reporting of HIV and AIDS cases, including confidentiality at all levels. NACP plans to revise these guidelines and to include updated human rights, legal and ethical issues.

Testing for HIV and STDs/RTIs is not widely available. There is no ability to screen patients for syphilis and extremely limited facilities to test for gonorrhea and other specific STDs/RTIs. A system for HIV sentinel surveillance is in existence and surveillance for STDs is currently being re-established. Most health personnel have not been trained to diagnose and treat STDs, RTIs or AIDS. NACP has just developed guidelines for syndromic diagnosis of STDs (based on WHO guidelines) and have started training physicians, physician assistants, nurses, and midwives in its use. As these new guidelines and training materials were being printed during the team's visit, they were not available for review. Drugs commonly used to treat most STDs/RTIs are on the Essential Drug List and distributed by NDS but health officials are concerned about drug resistant strains.

IEC is limited but efforts are being made to reach teachers, in and out of school youth, community leaders, refugees, pregnant women, and commercial sex workers with STDs/RTIs and HIV prevention messages. Demand for condoms substantially exceeds the supply available through the NACP. Population Services International (PSI) is developing plans for a pilot social marketing program for HIV/AIDS prevention, targeting the Monrovia area and possibly the border with Côte d'Ivoire, which would include the sale of condoms with accompanying IEC. PSI currently expects to bring one million condoms into the country in support of its program.
Safe Motherhood

Liberia has had a strong tradition of providing safe motherhood services through both trained traditional midwives and nurse midwives (certified midwives and RN midwives). Destruction of health care facilities (clinics, health centers, and hospitals) and lack of trained staff and equipment/supplies meant that caesarian sections and other emergency obstetric procedures were not available to most women during the war. This resulted in a rise in already high maternal mortality rates. While reliable national maternal mortality figures do not exist, in 1990, the maternal mortality rate was 560 per 100,000 live births (UNICEF). A 1993 study in five major hospitals in Monrovia (see UNFPA Project Agreement) yielded a figure of 1,060 (it should be noted that MOH&SW estimates for similar time frames are half as much). In addition, health workers report an increase in teen pregnancy and its related obstetrical problems, increasing instances of complications from abortion, and a rise in ectopic pregnancies caused by pelvic inflammatory disease.

Basic antenatal care (ANC) is available at reactivated clinics and hospitals and through TTMs at the community level. Tetanus toxoid is provided through the EPI program and UNICEF provides iron folate through the NDS. There is a need to review and strengthen ANC and post-natal care (PNC) training and services and make sure that they are available in all health facilities and through community-based workers.

The MOH&SW, with support from UNICEF/UNFPA/WHO, is spearheading an effort to strengthen all levels of emergency obstetric care in five counties (see family planning section). Activities will include: community-based training of women and youth in health topics; refresher training for TTMs; in-service training of nurses and midwives regarding recognition and referral of obstetric or abortion complications; establishment of functional emergency obstetrical care units in county hospitals; strengthening of the JFK Medical Center, Phebe Hospital, and possibly Redemption Hospital services and staff as emergency obstetric care training centers and referral hospitals; and strengthening of the National Drug Service's ability to procure, stor, and distribute essential reproductive health equipment and supplies.

Liberia does not have a national safe motherhood policy or guidelines, both of which would be useful in defining and promoting activities in this area.

Child Health

Liberia's infant mortality rate has remained consistently high at 144 per 1,000 live births between 1981-86 (DHS–1986) and 157/1,000 in 1996 estimates. Similarly, under-five mortality rose from 220/1,000 in 1986 to 235/1,000 in 1996. The leading causes of infant and child morbidity are malaria, diarrheal disease, and acute respiratory infection. While child health services have always been a part of primary health care, there is a move toward strengthening integrated case management of childhood diseases.

EPI is currently a priority area for the MOH&SW, as they work, with support from UNICEF, to reactivate the cold chain and expand program coverage. UNICEF is providing both vaccines and cold chain equipment as well as training for county health teams in management of the EPI program. An EPI policy was developed in 1993 and the national vaccination schedule follows

WHO recommendations. The policy targets children under three years and women of reproductive age (14-49). However, as EPI coverage was weak for several years, the target group for children has been raised to include all children under five years of age.

In cooperation with the MOH&SW, WHO supported an assessment of the EPI program in January 1998. It analyzed the environment, identified constraints, and made several recommendations in order to achieve its objectives of: increasing access to immunization for woman and children; conducting semi-annual National Vaccination Campaigns; and, developing a coordinated partnership between the GOL, communities, private organizations, and NGOs in the provision of immunization services. Subsequently, another WHO team assessed the EPI cold chain, logistics, and the health information system in late April 1998. They identified potential sites for the cold chain and listed possible implementation issues/constraints, which included cold chain equipment and maintenance; vaccine forecasting and use; cold chain and logistics management; injection safety; monitoring and supervision; transport; and training and energy sources.

A national policy and program for acute respiratory infections was discussed in 1992-93 but was not finalized. Treatment drugs are available through NDS. However, education for caretakers on the signs and symptoms of acute respiratory infections (ARI) have not been undertaken regarding timely referral to health facilities. The national control of diarrheal disease program has not functioned since before the war. Use of oral rehydration therapy was low before the war and inappropriate use of antibiotics and other drugs occurred frequently. Interestingly, the almost complete lack of government and other health services during the war led to increased use of home-based oral rehydration solutions. Health workers feel that people now recognize the value of ORS therapy.

The amount of acute child malnutrition seen during the war has recently diminished significantly. Therapeutic feeding centers are closing and the relief organizations that managed them are training health workers, using MOH&SW facilities, in growth monitoring, and the identification and treatment of more moderate levels of malnutrition. Infant nutrition is supported by widespread breastfeeding, which has been promoted in the past by a Breastfeeding Action Group. Health workers report that further education is needed regarding the definition and importance of full breastfeeding, the timing of weaning, and proper weaning food. Vitamin A is available through the National Drug Service for use in treatment of measles and there is discussion about providing regular supplementation to children and pregnant women. The MOH&SW is also concerned about iodine deficiency and would like to do a national study in this area.

Malaria continues to be the leading cause of morbidity among children and adults in Liberia. There is a national policy for the treatment of malaria and drugs are available through the NDS, although health workers would like to increase the availability of testing equipment in order to verify infection. Efforts to prevent transmission include support from UNICEF for impregnated mosquito nets, to be reinstated in 1999.

WATER AND SANITATION

UNICEF, the EU, and a variety of international and national NGOs are active in the water and

sanitation sector. Assuring safe water supply during the war and for returning refugees has been a priority activity for relief organizations. However, there are a number of issues that need to be resolved and that impact the transition to sustainable community water systems. The most common type of well in Liberia is a hand dug, wide-diameter family built well. These wells tend to be unlined, while wells installed with the assistance of emergency relief organizations are lined with concrete and have concrete lids with hand pumps. One issue is that wells dug during the rainy season, when it is difficult to reach an appropriate depth, dry up towards the end of the dry season. Another problem is that community participation in installing wells has varied greatly. Finally, there is no uniformity of equipment, and there is often more than one kind of apparatus within the same village that makes maintenance and repair more expensive.

A system for well and pump maintenance and spare parts has not yet evolved, although there is potential to involve the private sector. Maintenance costs are thought to be affordable once village economies are back on track but assistance will be needed until then. UNICEF is chlorinating both protected and unprotected wells on a fairly widespread basis and communities appear to have accepted that water from a hand pump is more potable than water from an unprotected well and in either circumstance, that it is necessary to chlorinate. The chlorination program has helped avert major outbreaks of diarrhea and cholera. Training materials have also been developed for chlorination of household drinking water.

Sanitation activities have focused on construction of public latrines at health facilities and schools. Unfortunately, they tend to be the expensive, ventilated, improved pit design and are not appropriate for replication at the household level. There is interest in using the “Sanplat” or Mozambican slabs for family latrines. These are relatively inexpensive but would require subsidies to encourage widespread use and eventual private sector production of the slabs.

Activities in water and sanitation have not been accompanied by effective community education. The work of the MOH&SW environmental health technicians is being reactivated but methods have not been updated. Clinics and other health sector personnel could provide critical support by modeling appropriate environmental health and hygiene behavior as follows:

- Improved water sources and latrines on-site;
- Correct maintenance of hand pumps and proper drainage of stagnant water;
- Correct maintenance of latrines including provision of hand washing facilities near the latrine;
- Hand washing facilities, including soap and clean towels, in the clinic, and the practice of regular hand washing by clinic personnel;
- Safe water storage and handling practices, particularly for potable water;
- Correct disposal of garbage, particularly medical waste.

Other roles for health personnel include coordinating with those undertaking community water and sanitation activities, working through the Community Health Committees to encourage chlorination of wells and family water supplies, providing training in storage and handling of potable water, and liaising with school officials to provide environmental health education in primary schools. The MOH&SW and the Ministry of Education should consider jointly developing a national curriculum to facilitate dissemination of these and other health messages.

PHARMACEUTICALS

Priorities in this sector include assuring the availability and rational use of essential drugs and medical supplies, establishing and implementing key policies, and re-establishing a national drug-testing laboratory.

Policy

A National Drug Policy provides the mandate for improving and reforming the pharmaceutical sector. It is an important tool that guides policymakers and all those involved in the pharmaceutical sector. Liberia has no official National Drug Policy but a draft policy was prepared in August 1992. A national committee, the National Drug Policy Task Force, is responsible for finalizing the draft and revising the Pharmacy Law. The draft policy addresses issues in the following areas: policy and management, national drug supply system, rational use of drugs, quality assurance, revolving drug fund and community financing, traditional medicine, and human resources.

The draft policy advocates for an autonomous, not-for-profit, drug supply service that will be a public-private venture with adequate GOL support to ensure its perpetual existence. It also sets out the plans to institute a revolving drug fund. The goal of the policy is to ensure the availability of safe, efficacious, and quality drugs at an affordable cost to the people of Liberia.

Legislation and Regulation

The existing drug laws have not been updated since 1976. A drug regulatory authority (the Pharmacy Board) with a mandate to register drugs and control quality and to license pharmacists and pharmacy business premises has recently been re-established. However, these functions of the Pharmacy Board have been difficult to implement because of the loss of records, personnel, and logistical support as a result of the war. Registration of pharmacies, medicine stores, and wholesales are ongoing. Currently, there is no registration of pharmaceutical products, and no records exist on the number of pharmaceutical products previously registered.

Importation of drugs by private institutions and NGOs requires the approval of the chief pharmacist of the MOH&SW. Drugs imported into the public sector health system must be on the national Essential Drugs List (ED). However, the ED does not cover drugs for use at referral and teaching hospitals and this poses a problem. The chief pharmacist uses his discretion to approve such requests.

The draft National Drug Policy proposes that all drug donations must be products registered in

Liberia and on the national ED, must be registered for use in the country of origin, have at least 12 months shelf life or the expiry date must not be less than 70 percent of the stated shelf life, and be labeled in English. However, these provisions are currently not being applied.

Budget and Finance

The MOH&SW does not make budgetary allocation for drugs as currently all drugs are supplied through NGOs. The two largest suppliers are the National Drug Service (NDS) and the Christian Health Association of Liberia (CHAL). Drugs and medical supplies are distributed by the National Drug Service are free to MOH&SW facilities but NGO and Christian mission organizations pay a fee. The NDS charges these institutions a 20 percent mark up on the catalogue price. Twenty-five percent of its stock was distributed to cash customers and the remaining 75 percent went to MOH&SW run facilities. CHAL, on the other hand, supplies drugs to its members at a 25 percent markup with a 5 percent service charge on the listed (catalogue) price of the item. Revenue generated from the markup applied by NDS and CHAL is used to supplement their drug procurement budget. All public health facilities dispense drugs to patients free of charge.

The MOH&SW does not operate a revolving drug fund. The Bamako Initiative, however, is seen by the MOH&SW as an important mechanism to improve the health of the people and was in operation before the war. There were efforts then to involve communities in the operation of the scheme. The draft National Drug Policy has a section devoted to the establishment of a Revolving Drug Fund through the NDS and CHAL, with government support and community involvement. In general, health workers feel that patients should contribute towards drug costs to set up a revolving drug fund. There are anecdotal reports on increasing use of private health facilities where fees are charged far in excess of the public health facilities. There are also accounts of patients (in both urban and rural areas) taking their hospital prescriptions to private pharmacies to be dispensed.

Some private insurance companies provide group health insurance coverage that includes in-patient care and drugs. The health insurance schemes are optional to civil servants that also contribute to the national Social Security Scheme.

Procurement

The MOH&SW does not budget for or import drugs. Drug acquisition for the public sector is primarily through NDS and CHAL. There is no system for monitoring supplier performance. Most drug purchases were done through IDA and UNICEF.

Procurement is based on a combination of morbidity and consumption methods. The stores management software at the NDS is not used for determining needs. The NDS has developed a quota system through which the level of supplies to health facilities is determined taking into consideration morbidity statistics supplied by the health facility and its previous month's consumption data. It is a requirement of both NDS and CHAL that requisitions for drugs and supplies are accompanied by morbidity data. This fulfills the Health Information System component of their function.

Local pharmaceutical manufacture is non-existent. None of the health facilities currently has the capacity to manufacture IV fluids, although several did before the war. It should be possible to

revive some of these centers, particularly NDS and Phebe Hospital, to re-start production and supplement IV fluid imports.

Logistics

The MOH&SW is not involved with the distribution of drugs and medical supplies. Most health facilities collect their supplies from the NDS on a monthly schedule with a lead-time of between one to two weeks. The NDS delivers to only three locations: Phebe Hospital (Bong), Ganta Community Clinic (Nimba), and the Liberian Government Hospital in Buchanan (Grand Bassa/River Cess). From these sites, hospitals and clinics in the respective counties collect their drugs and supplies. The counties in the southeast are currently supplied through Children's Aid Direct (CAD) and MERCI. The National Drug Service hopes to establish a sub-depot at SwedeRelief in Grand Gedeh to serve the southeast. Eventually, it anticipates a network of strategically placed sub-depots to serve the whole country.

The availability of essential drugs at health facilities is an important indicator of effectiveness of the supply system. All of the 12 selected tracer drugs were available at the NDS and the CHAL warehouses and during field investigations, most facilities had approximately 79 percent of the tracer drugs on the shelves in the dispensary.

Drugs for the treatment of tuberculosis were not available at most of the facilities with tuberculosis programs. Those with drugs had isoniazid thiacetazone (pediatric dosage) and streptomycin. Only one facility, Phebe, had ethambutol and isoniazid. None of the facilities had rifampicin or pyrazinamide.

Expired drugs were found at some of the facilities but these were mainly donations received from abroad that were almost expired on arrival. At the NDS, improved stock management has reduced the level of expired drugs from US$25,000 to $500.

The NDS staff carryout supervisory visits to all the health facilities to which they supply drugs. During these visits, they check documentation at the drugs and medical supplies stores and also at the outpatient clinics. They conduct training on stock management and the rational use of drugs. The number of trained personnel and transportation is a constraint in this aspect of their operations. However, they strive to visit each county once every two months. One of the major constraints affecting the distribution of drugs and medical supplies is the poor state of the roads, especially during the rainy season. This problem will require a plan of distribution to rural locations before the rains. The proposed establishment of sub-depots at selected county seats will contribute to the solution of this problem.

Another major constraint is the absence of trained pharmacists and dispensers in the country as a whole. Almost all trained personnel are in the private sector where remuneration is much better than in the public sector. There are no pharmacists or dispensers in any of the government or mission sponsored hospitals. Personnel currently working in pharmacies and dispensaries at health facilities have been trained on the job. The training provided by the NDS monitoring and supervising team is not sufficient to address this deficiency. There is a need to train and retain

adequate numbers of dispensary technicians, especially for the rural health facilities and pharmacists for the county hospitals and referral centers.

National Essential Drugs List and Drug Information

A national Essential Drugs List was released in March 1998 by the MOH&SW with the support of WHO, UNICEF and the NDS but it had not yet been widely circulated. The drugs on the list are categorized according to whether there is a physician on site or not. Drugs for medical specialists and referral hospital use are not included. A list of essential supplies is also included. The National Drug Policy Task Force is responsible for the regular update of the ED.

Treatment guidelines developed for middle level health professionals circa 1986 have not been revised. Copies of the treatment guidelines were available in about a third of the 10 health facilities visited. A national formulary does not exist.

Drug Utilization

A formal study on prescribing patterns was not conducted. However, when time permitted, a quick assessment was made of a few important drug-use indicators at the health facilities visited. There are about 29 pharmacists in the country, and the public sector currently has only one of these, the chief pharmacist. There has been no accurate determination of the number of pharmacy assistants technicians in the public sector. All functioning hospitals and health centers have pharmacy departments or dispensaries, but they do not have certified staff.

The NDS does not procure drugs for tuberculosis and leprosy. This is done through a special program.

Quality Assurance

The NDS used to have a quality control laboratory performing basic tests but this is not functioning now. The NDS does not use the WHO Certification Scheme on the Quality of Pharmaceutical Products Moving in International Commerce.

Private Sector Pharmaceutical Activity

There are 52 pharmaceutical wholesalers and 160 private pharmacies in Liberia. Most of the private pharmacies (132) are in Monrovia. Drug prices are not regulated in the private sector. Essential drugs found in private pharmacies were both generic and name brand.

In the private sector, all pharmacies visited sold ampicillin and metronidazole without a prescription. More importantly, in response to a simulated customer request for advice on treatment for a 2-year-old child with diarrhea, all 10 shops visited offered metronidazole tablets or suspension and none suggested oral rehydration solution.

RECOMMENDATIONS FOR USAID SUPPORT

There is general agreement that Liberia is in a transition stage and that peace is still fragile. At the same time, the GOL and its people are anxious to move forward with strategic planning and

institutional development. With this in mind, USAID should consider activities in two categories: those that can be implemented relatively quickly to meet immediate needs; and those that begin a longer-term process of health sector strengthening.

Critical Issues

Clinics. One of the keys to success will be building upon OFDA's investment at the clinic level. Currently, because of the destruction and looting during the seven years of civil war, there are only a small number of functional clinics and trained health care providers supported by NGOs with funding provided by OFDA and other donors. These service delivery facilities and trained personnel will provide a foundation upon which a transition package can be built. The clinics supported by USAID/OFDA are at risk because there will be a gap from project design to funding. OFDA funding is scheduled to end in December 1998 and it is unlikely that FY99 funding for transition activities will be available to the Mission before late spring 1999.

Options should be explored as soon as possible for funds to continue service delivery activities, and provide clinic support and supervision as well as much needed salary incentives for health care providers. This will be necessary to ensure continued access to primary health care services, avoid loss of investment, and maintain credibility in the donor community.

Institutional preparedness. It is expected, (and it is one of the assumptions upon which the assessment team predicated its recommendations), that in the areas of EPI, disease surveillance, and epidemic preparedness, WHO and UNICEF will continue their plans for institutional strengthening, capacity building, rehabilitating the cold chain, and providing vaccines for National Immunization Days (NIDs).

It appears from discussions with the WHO Health Information Systems (HIS) and logistics assessment team, and from their substantial investment in assessment and planning, that WHO and UNICEF intend to move ahead with this activity. It is less clear as to how the activities will be funded. USAID Liberia should, where possible, offer support in the form of coordination of activities, and assistance with NIDs and IEC messages.

The Southeast. The issue of support for revitalizing health services in the southeast remains a difficult problem for all donors. Everyone is in agreement that there is a need but they also readily admit that there is no easy solution in the short term. Most of the health infrastructure has been destroyed and during the rainy season bridges and roads are either washed out or are impassible to the extent that some parts of the southeast are inaccessible for up to five months a year.

At present, the population is not returning as rapidly or in the same numbers as they are in the Northeast and Northwest. It has also been noted that the returnees appear to be less motivated than in other parts of the country. A situation such as this poses a practical dilemma in a resource-constrained environment. This is a time when donor coordination could realize large dividends. A mechanism should be explored whereby the southeast would remain eligible for relief services, much as a disaster area is declared in the United States after a flood, etc., until the donors could devise a joint plan to address the issues of rebuilding the infrastructure, revitalizing the health

centers, and mobilizing the communities.

Activities with Impact in the Short Term

Expand access to primary health care services. USAID should continue to support the revitalization of health centers and clinics so that they are able to provide regular care, preventive services, and health education and promotion in the areas of: family health, which includes reproductive (family planning, safe motherhood) and child health (ARI, CDD, nutrition), and disease prevention (STD/HIV, TB, malaria). These program areas are not exclusive but rather are those in which USAID has demonstrated strengths and can effect substantial impact. USAID has traditionally formed partnerships in Integrated Management of Childhood Illnesses (IMCI) and EPI with UNICEF and WHO and it should seek to capitalize on those relationships in Liberia.

At the same time, USAID should assist the GOL to strengthen the county health teams and clinic staff to work with communities on health education, EPI outreach, improved sanitation, and other preventive activities.

Support of service delivery will meet an urgent and highly visible need expressed by both the general population and the GOL. It directly addresses the first priority of the MOH&SW's *Action Plan for Revitalizing the Health Sector*, "Restoration of hospital, health centers, clinics and health posts into full functionality." In addition, it will contribute to five of the remaining eight priorities: developing and strengthening of reproductive health services, including training of TBAs; developing and strengthening of child health services; revitalizing nutrition services; revitalizing disease control programs; and improving water and sanitation.

Update service provider knowledge in family planning, STD/RTI/HIV prevention and other areas of reproductive health service delivery. USAID should provide assistance for update training for health workers in contraceptive technology, syndromic diagnosis of STDs/RTIs, emergency obstetric care and other reproductive health areas directly related to service delivery. The current UNFPA/UNICEF/WHO activity in reproductive health and NACP's work in STD/RTI case management will start this process. However, it will only reach a limited number of health workers and is only funded through the first quarter of 1999. USAID should coordinate and collaborate with the UN agencies and NACP to expand these efforts, concentrating on certified midwives, nurses, trained traditional midwives and physician assistants with particular emphasis on personnel working at the county health department, clinic and community levels.

This activity directly supports the reproductive health priority area, and also begins the process of building the capacity of health workers. Access to updated information will also begin to improve quality of care in service delivery.

Increase the availability of emergency obstetric care. UNFPA/UNICEF/WHO will train and equip emergency obstetric care teams in five county and two to three referral hospitals over the next 15 months. To the extent possible, USAID should support expansion of this activity to other hospitals. As training materials and trainers would already be in place, it should be relatively easy to initiate.

This activity directly supports the reproductive health priority area and also provides skill-based

training for health workers.

Increase the availability of condoms for STD/HIV prevention and family planning. USAID should support condom supply and a social marketing effort that would increase the availability of condoms for disease prevention and contraception and encourage their use. This activity supports both reproductive health and disease control priority areas.

Activities with Impact in the Medium Term (Two to Three Years)

At the same time that short-term activities are being initiated, work should begin on longer-term efforts to strengthen the health structure and quality of care. These activities could be introduced in a phased manner. As most of them involve a process of updating knowledge in technical and management areas, this investment will not be lost should the political situation in Liberia deteriorate.

Strengthen national health program policies and service delivery guidelines. This is a high priority for the MOH&SW and is one of its mandates under the decentralization plan. It supports all of the Action Plan priority programs. It offers an opportunity for USAID to provide assistance at the central level that would support strategic planning and the delivery of health services by providing standardized information and direction.

There will be a variety of time frames for this activity depending on the particular health program area. Some policies and guidelines, such as EPI, CDD, and malaria, were in existence prior to the war and would need review for possible revision. Others, such as the decentralization guidelines and the National Drug Policy, were developed just prior to the war and would need less extensive work to be finalized and implemented. In other areas, such as family planning and safe motherhood, policies and guidelines have not existed in the past and need to be developed.

Capacity building and strengthening of county health teams. This activity is important to capitalize upon the policy and guideline development at the central level and to create an important synergy for decentralization. The county health team is the focal point of the decentralization plan and revitalization of health care services. As such, strengthening its management, planning, and supervisory capacities is a critical area for donor support. USAID should provide assistance for capacity building in planning, program implementation, supervision, and financial management. Particular attention should be paid to the public health officer's role within the Community Health Department, since it has the responsibility of management for primary health care activities.

A competent and organized CHT with effective management systems will be the foundation for the delivery of quality PHC services. Short-term training for all members of the CHT in their respective fields should be instituted. Proficiency in the management of revenues and expenditures would develop confidence at the central level and move the process of decentralization. Systems should also be developed to support the effective delivery of primary health care.

The CHT is charged with the development of an annual county health plan and outreach to

community health committees in the catchment areas around clinics. USAID should provide technical assistance to counties to accomplish the following goals: develop a vision; formulate county health plans; create a consultative environment with communities; and, work collaboratively with NGOs, the private sector, and other county officials.

Strengthen pre- and in-service training. The need to build capacity among Liberia's health professionals was stressed continuously at all levels throughout the assessment. Activities to revitalize pre- and in-service training for critical cadres of health workers will increase the number of qualified professionals available in the country and improve quality of care, thus supporting all of the MOH&SW's priority program areas.

Priority training programs should be those for mid-level and community-based workers including: physician assistants, registered nurses, certified midwives, and trained traditional midwives. Training curricula and accompanying materials for each program should be reviewed, updated and revised as necessary to reflect new technical information and approaches to learning. The existence of newly revised and or developed national health policies and service guidelines will help to guide curricula revision. Trainers should be given the opportunity to update their knowledge and skills in teaching and training methods.

Selected training institutions should be revitalized so that they may begin implementing courses. This would include re-supply of teaching materials such as anatomical models, audio-visual aids, and reference materials. It may also require some rehabilitation and re-equipping of classrooms and labs as well as assistance for service delivery at affiliated clinical training sites.

Increase community involvement in health care. USAID should support community involvement in working with local health facilities, formulating community plans, promoting health education, and undertaking community health activities (such as improving water and sanitation). The community health committees should be reactivated. In addition, the MOH&SW has expressed interest in reinstituting the Community Health Worker program, which would also be an important area for support.

Increase knowledge and use of STD/RTI and HIV/AIDS prevention measures. The rapid increase in STDs/RTIs and HIV/AIDS infection during the war is of major concern to all health workers. USAID should support the National AIDS Control Program and others by making information on infection prevention more available, increasing access to STD/RTI diagnosis and treatment services, promoting the use of condoms, and undertaking epidemiological surveillance activities.
Strengthen local NGOs. USAID should assist in strengthening the capacity of local NGOs in the areas of organizational, administrative and financial management. This would support sustainability in the health sector as well as encourage involvement and ownership by the Liberian private sector. Two prime candidates would be the Christian Health Association of Liberia (CHAL), a former successful grantee of USAID with projects in 1986 (US$3 million) and 1989 ($3.4 million) and the National Drug Service, which had implemented a revolving drug fund pre-war and has been instrumental in maintaining drug supply to health facilities post-war.

Activities with Impact for the Long Term (Two to Five Years)
If peace prevails in Liberia, USAID could consider other activities to build upon efforts undertaken in the transition period. Some suggestions are:

Implement cost recovery schemes. There is general agreement that it is too early to restart a revolving drug fund or other cost recovery schemes. However, this may be feasible within two years and the groundwork for implementation should be laid now.

Expand services in underserved areas. If the political situation remains stable and if there is some improvement in roads and other basic infrastructure, USAID should support expansion of service delivery activities to the southeast.

IMPLEMENTATION

A suggested model for implementation of the recommendations would be one that initiates activities simultaneously at the central and county levels. Field support mechanisms for short-term technical assistance could accomplish this relatively quickly, particularly for activities such as the development of policies, guidelines and training modules. It would also be cost effective and would not place a large management burden on the Mission.

Using international NGOs and USAID collaborating agencies under cooperative agreements might be a mechanism for putting long-term technical assistance in place to guide and coordinate activities at the county level and to provide technical support for strengthening management of health care systems.

A successful model should be developed early on for the county health team and community health department functions, whose members would then be able to participate in training and replication of the model elsewhere. In that regard, the assessment team suggests that the County Health Team and Community Health Department for Bong County would be prime candidates as they have the advantage of prior training and strengthening from the private sector, the continuing supervision of all the MOH&SW clinics in Bong County, and enjoy the confidence of the MOH&SW as its area referral hospital.

There is also a history of cooperation by and between the Phebe Hospital and School of Nursing (where the Bong CHT is headquartered) and the Curran Hospital and School of Midwifery (Lofa County) and Ganta Hospital (Nimba County) in the provision of training for personnel and logistical support. All three facilities work closely with the MOH&SW, receive direct subsidies from it, and supervise all or some of its clinics in their respective counties. A unique opportunity exists to capitalize on the tri-county proximity and the historical relationship thereby enhancing donor investment and, at least, doubling the number of communities benefiting from activities.

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APPENDIX I

TRAINING PROGRAMS FOR LIBERIAN HEALTH PERSONNEL
Post-War Period, April 1998

Prepared by:
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Present Status

Liberia's health facilities are currently operating with a shortage of trained middle and upper level health personnel. During the civil war a few were killed and many, including instructors, sought refuge in other countries. Training programs were shut down, and curricula, textbooks and training equipment looted. The training hospital at Zorzor and the midwifery school at Zwedru were completely destroyed. A status report follows:

Tubman National Institute of Medical Arts (TNIMA–Monrovia. With the end of the war, TNIMA in Monrovia has reopened its programs for training three-year registered nurses, two-year certified midwives, three-year physician assistants, and environmental health technicians. They have not restarted the training of lab technicians, x-ray technicians, or nurse anesthetists. TNIMA faces severe problems, including lack of adequate staff (75 instructors previously, now 17 plus 8 who come in for a few hours each week); shortage of references, modules, and teaching equipment; overcrowded dormitory rooms with many students sleeping on the floor; no vehicles or funds for transportation of students to Monrovia clinics or to rural experience; and absence of electricity and running water. JFK Medical Center, housed in the same building, is not currently operative for clinical instruction of the students.

Dogliotti School of Medicine–Monrovia. It has reopened. The building itself is in useable condition following some roof repairs. It was looted during the war. This is a five-year course with the fourth year purely clinical experience. Traditionally, this was obtained at JFK Medical Center, but it is currently non-functional. Presently there are 14 first year, 16 second year, 7 third year, and 11 fifth year medical students. It is operating with approximately 50 percent of the needed instructors. The labs are not functional, except for the microbiology and parasitology labs, which WHO supplied with microscopes. There is no electricity or running water. Two hand-pumps on the grounds are operational. Dogliotti also has had a course for pharmacists. Greatest needs are:

- Professors/instructors,
- Updated reference books and journals for the library,
- Texts for students,
- Replacement of damaged and looted training equipment, and
- Adequate programs for clinical experience–either by reopening JFK Medical Center, or developing other affiliations.

Don Bosco Polytechni–Mother Patern College of Health Sciences–Monrovia. This also was looted. Located on Randall Street in Monrovia, this college has courses in:

- Laboratory–three-year diploma course to upgrade skills of laboratory aides and assistants. Only currently working assistants are accepted. Classes are held 3-6:30 p.m. to accommodate their work schedules.

- Primary Health Care–four-month certificate designed to train members of health teams with the knowledge, concepts and skills of the primary health care process.

- Social Work–both a four-month certificate course and a three-year associate degree course are available. These focus on the child in difficult circumstances in the present society.

- Nursing–A three-year associate degree program will open in September 1998.

LUDA–Buchanan, Grand Bassa County. This is a local two-year training program for personnel to staff Grand Bassa clinics that was recently started by the Grand Bassa County Health Department. It has not been certified by the ministry. They require 10th grade as a minimum, with high school graduation the norm. The first class of 21 students is nearing completion. They have a small library with primary health care books, and use locally produced pamphlets for teaching.

Cuttington College and Phebe Hospital–Bong County. Cuttington College had Liberia's only four-year registered nursing program with a bachelor of science degree. Phebe has reopened some portions of the hospital, but Cuttington is still closed and the program has not yet been restarted.

Phebe Hospital, built by the Lutheran, Episcopalian, and Methodist churches in 1965, is the official Liberian government hospital for Bong County. It was attacked, looted, and severely damaged (probably by the Ulimo K faction) on Sept. 23, 1994. Patients and staff who were unable to escape were massacred. It had the following training programs:

- Certified midwifery–two-year course,
- Midwifery certification for RNs,
- Practical nursing–two-year course,
- Laboratory technician,
- Laboratory assistant, and
- Nurse anesthetist.

The Community Health Department also organized training for traditional trained midwives (TTM) and community health workers throughout the county, and conducted monthly refresher meetings for staff from the outlying clinics and hospital outpatient department.

Following the 1994 massacre, the outpatient department was reopened first. The hospital itself is being repaired wing by wing in a systematic fashion. Admissions are averaging over 450 per

month, with approximately 33 percent pediatric, 20 percent obstetrical or gynecological, 30 percent surgical, and 17 percent medical. Most deliveries are done by the traditional midwives in the villages. Problems are sent in to Phebe. Hospital deliveries are averaging just over 50 per month, with approximately half requiring C-sections. These numbers have not yet approached what Phebe did in the past, but are excellent for a clinical teaching situation for midwifery and nursing students.

Mr. Arthur Cooper (RN, B.Sc.) is director of training. Presently refresher courses are being held for TTMs and hospital and clinic staff. Phebe is hoping to restart the regular training courses in March 1999. Curricula are still available for the certified midwifery, practical nursing, and laboratory programs. All copies of the TTM curricula were looted, but one was repurchased from a market woman who was about to use its papers to wrap peanuts for sale. Basic training staff is available but funding for operating the programs has not yet been found. Looted reference books, training modules, and teaching equipment need to be replaced, and classrooms need some repair.

Curran Lutheran Hospital–Zorzor, Lofa County. The hospital was started in 1924 when the nearest road access was at Mt. Coffee (30 miles from Monrovia), requiring a seven-day walk through the rain forest. It grew to a 97-bed facility, with a strong emphasis on maternal and child health. Deliveries averaged about 125 per month. It had a strong community health department and district health team, was responsible for supervising the MOH&SW clinics in the Zorzor, Salayea, and Belle districts of Lofa County, and was responsible for EPI, TB, and Leprosy control in this area. The hospital trained two-year certified midwives, practical nurses, and laboratory assistants. The hospital was completely destroyed during the war–only the stone walls remain standing. Currently Mr. John Wolobah, RN, and other former staff members have restarted an outpatient clinic and are doing deliveries using a former small classroom building that escaped the destruction.

Ganta Hospital–Nimba County. The hospital was started in 1926 by the Methodist church, is a 65-bed facility in Nimba County. Attached is a TB and leprosy center. Ganta had a three-year RN program. Ganta also was looted and some of the TB and leprosy patients were massacred during the civil war. All categories of patients are again being admitted. The surgical load is about 60 patients per month. A new building for rehabilitation and production of prostheses for leprosy patients is nearing completion. The Liberian government's Nimba County Health Department, responsible for supervising the county clinics and EPI, is based at Ganta Hospital. The three-year RN program needs to be restarted.

The Southeastern Region Midwifery Training Center–Zwedru, Grand Gedeh County. This institution was started about 1985 in Zwedru in Grand Gedeh County, has been completely destroyed. It trained two-year certified midwives with students drawn from the southeastern counties. It was successful in getting many of these students to stay in this area, whereas most midwifery students trained in Monrovia, Phebe, or Zorzor declined to accept southeastern positions. The hospital in Zwedru was also essentially destroyed. Eventually this program also requires reopening. Presently the area is sparsely populated and a logistical nightmare, especially during the rainy season.

The Christian Health Association of Liberia (CHAL)–Monrovia. CHAL is not a clinic or hospital,

but a support organization for medical clinics and hospitals sponsored by the various denominations in Liberia. It operates as an NGO. In the past it ordered and imported pharmaceuticals for these medical facilities, a function that is being restarted. It has done extensive work in community health projects and development (including training), and development of maternal and child health (MCH) materials with the MCH division of the Ministry of Health, including assisting in the development of the TTM curriculum. It has had funding from USAID and other international donors in the past in support of its programs.

Other. Other hospitals operating in the Monrovia area but not involved in formal training at the present are:

- *JFK National Medical Center*–currently operating its outpatient department. Inpatient facilities have not been restored, but surgery is being done in the Maternity Hospital on the same grounds. Restoration of the southeast wing of first floor of JFK is in progress.

- *Seventh Day Adventist Hospital (former Cooper Clinic)*–operational, located in the suburb of Sinkor.

- *SwedeRelief*–165 beds on Bushrod Island, located in a warehouse, run by Medecins Sans Frontieres. This looks like a warehouse, but runs like a well-managed developing country hospital. It is well supplied with drugs.

- *Redemption Hospital*–run by MOH&SW on Bushrod Island, it is functioning, but said to currently be having administrative problems.

- *ELWA Hospital*–run by the Society for International Ministries (SIM) Mission in the Paynesville suburb, it reopened about 1991 and continued to function until April 6, 1996, when it suffered extensive damage for the second time. It has just been reopened again and is currently operating as a health center.

Recommendations

Review training curricula. Curricula need to be reviewed and updated for all training institutions, from the medical school and TNIMA through the rural institutions. Competency-based modules need to be reviewed and modified where they exist, and developed where they do not exist. External advice would be valuable, but knowledgeable Liberian insights should prevail in curriculum decisions. Obviously the Ministry of Health with the nursing board needs to be heavily involved, along with key personnel from the training institutions.

Review trained traditional midwives curricula. A training curriculum exists for TTMs, developed by the MCH division of the Ministry of Health with assistance from CHAL. Most copies were destroyed, but Phebe Hospital has a copy. It should be reviewed for possible revisions, and sufficient copies produced for all TTM trainers.

Review community health worker curricula. A complete curriculum for training community health

workers including a trainer of trainers manual was developed with the ministry by the USAID-funded Southeastern Region Primary Health Care Project. It should be reviewed and updated for use.

Supply reference and training materials. Appropriate reference and training materials need to be repurchased for all functioning training courses to judiciously replace or improve on what was looted.

Restart training programs. Training programs that are not presently functioning need to be restarted. Phebe Hospital's plan to begin with the training of certified midwives, practical nurses, and laboratory personnel and add other programs in the future is appropriate. The three-year RN program at Ganta is likewise important. Cuttington College must be reopened before the four-year RN degree program can be reinstituted. Zorzor needs at least partial rebuilding and additional staffing before training can resume, and when the time comes, it is recommended that they start with the certified midwifery program. It will probably not be practical to reopen the Southeastern Region Midwifery Training Center within the next three years, but it should be kept in mind that it stands the best chance of training certified midwives who will actually continue to work in this region.

Encourage participatory review process. Curricula with training modules need to be revised and/or developed on a national basis, using the pooled talents of all institutions that teach the same course to develop that course's curriculum. Physician assistants (PAs) and environmental health technicians (EHTs) are trained only at TNIMA in Monrovia, eliminating the need for multiple institutions, but revising their curricula should require the input and talents of county health officers and county health teams who work with the PAs and EHTs in the rural areas. New curricula with modules will not be available in the early phases of the program, and temporary materials will need to be developed quickly to be used for the programs that have already been restarted. In other words, production of interim training materials, principally by the Liberian instructors currently in the training programs, is absolutely necessary.

Create capacity to reproduce training materials. The function of producing training materials for the classroom should be decentralized, with a simple center at least at Phebe with a computer, laser printer, two heavy duty photocopiers, a heavy duty stapler and a good supply of paper. A single person capable of typing and able to run the equipment might be able to handle it. It would have to be strictly off-limits for uses other than the training institutions. A second such center should be located at TNIMA in Monrovia.

Maintain continuing education. Monthly continuing education for county health personnel needs to be maintained where such programs are operational and restarted where they are not, on a day that causes the least disruption of the clinic activities; Saturdays often work well. The meeting day can also serve for collection of the previous month's data, distribution of pay, discussion of problems, and issuance of drugs and supplies to take back to the clinic. Where distances make a single meeting location difficult, it will be necessary to schedule two locations for monthly continuing education.

Provide transportation to CHTs. Transportation needs to be available for the county health teams to supervise and teach health workers in the clinics, and to visit communities and community health committees. The source of funding for vehicle procurement needs to be worked out.

Restore capacity building. All facilities require capacity building. Various areas of local competence and reliance have been lost, and need to be restored. One example would be the local production of IV fluids, done in the past in Phebe, Ganta, and Zorzor, as well as in ELWA Hospital in Monrovia. Local production proved much less expensive, did not require transportation of bulky IV fluids, and guaranteed no shortages in the supply of this critically needed item. Before the civil war this production depended upon an electric water still, large electric autoclave, and reusable Pyrex IV bottles. In the more distant past in the history of these hospitals, freshly caught rainwater from a tin roof was used instead of distilled water, and a large pressure cooker was used instead of an autoclave. Rain and a pressure cooker are still definitely available. To restore local IV production the only purchases necessary would be reusable IV bottles or IV bags and easily obtainable simple reagents in bulk (dextrose, salt, and potassium chloride), and, of course, personnel would need to be retrained.

Support training of physicians. It is my assumption that from the training aspect this project will concentrate mainly on the training of middle level health personnel (i.e., physician assistants, RNs practical nurses, and environmental health technicians, and perhaps lab technicians) and low level, community-based personnel (community health workers and trained traditional midwives). However, we must not forget the medical school in the training, for it is the source of the physicians who are assigned to the county hospitals and county health teams. A study of what could be done reasonably to assist during this difficult interim period would be appropriate. Purchase of some reference materials suggests itself as one step. Identification of an exchange professor from the United States who would accept the present challenge with not much to work with would also be appreciated by the medical school dean, Dr. Bahr.

One critically needed area of assistance would be the revision of the curriculum to train each physician for competency in working as a county health officer and directing a community health department in the counties, as well as handling the emergencies that occur both in the rural and urban areas.

Review administrative manuals. A complete set of administrative manuals for county hospitals and community health was developed for national use during the USAID-sponsored Southeastern Region Primary Health Care Project, 1985-1989. The complete copies are still available with Dr. Kedrick Kiawoin, UNICEF/Liberia Health Officer. They should definitely be taken into consideration, revised as needed for the present situation, and used for capacity building with the present anticipated project.

APPENDIX II

PHARMACEUTICALS

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FINDINGS

Policy

A National Drug Policy provides the mandate for improving and reforming the pharmaceutical sector. It is an important tool that guides policymakers and all those involved in the pharmaceutical sector. Liberia has no official National Drug Policy. A draft National Drug Policy was prepared in August 1992. A national committee, the National Drug Policy Task Force, is responsible for finalizing the draft National Drug Policy and revising the Pharmacy Law. The draft National Drug Policy addressed policy in the following areas: policy and management, national drug supply system, rational use of drugs, quality assurance, revolving drug fund and community financing, traditional medicine, and human resource.

The draft policy advocates an autonomous, not-for-profit drug supply institution that will be a public-private venture with adequate government support to ensure its perpetual existence. It also sets out the policy regarding the setting up of a revolving drug fund. The goal is to ensure the availability of safe, efficacious, and quality drugs at an affordable cost to the people of Liberia.

Legislation and Regulation

The existing drug laws with regulations are dated 1976 and have not been updated since. A drug regulatory authority (Pharmacy Board) with a mandate to register drugs, pharmacists and license pharmacy business premises has recently been re-established. The Pharmacy Board is also responsible for certification of trained pharmacists, inspection of pharmacy business sites, assuring the quality of pharmaceutical products in commerce, and advising the GOL on matters concerning pharmacy. However, these functions of the Pharmacy Board are being currently revived because of loss of records, personnel, and logistical support as a result of the war and looting and destruction of the MOH&SW building.

Registration of pharmacies, medicine stores, and wholesales are ongoing. Registration fees for pharmacy stores are L$6,000 the first time and an annual renewal fee of $4,000. Currently, there is no registration of pharmaceutical products, and no records exist on the number of pharmaceutical products previously registered. The Pharmacy Board intends reintroducing drug registration. In the revised procedures, drugs must be reregistered every five years. The proposed fee for registration of a dosage form is US$30 and that for a pharmaceutical company to do business in Liberia is $500.
Importation of drugs by private institutions and NGOs require the approval of the chief pharmacist of the MOH&SW. Drugs imported into the public sector health system must be on the national

Essential Drugs List. However, the EDL does not cover drugs for use at referral and teaching hospitals and this currently poses a problem. The chief pharmacist uses his discretion to approve such requests.

The draft National Drug Policy proposes that all drug donations must be products registered in Liberia and on the national EDL, must be registered for use in the country of origin, have at least 12 months shelf life or the expiration date must not be less than 70 percent of the stated shelf life, and be labeled in English. These provisions of the National Drug Policy are currently not applied because of Liberia's recent emergency situation and the fact that the policy has not been adopted.

Inspecting activities are minimal and limited to the Monrovia area because of personnel and logistical constraints. Pharmacy inspectors have a checklist for inspection duties. Although there are legal provisions to penalize pharmacists and other drug sellers who infringe the law, these are presently not enforced.

The law does not mention generic substitution by pharmacists. The draft National Drug Policy also does not mention generic substitution by pharmacist, however, the committee revising it intends including this provision.

Budget and Finance

The FY 1998 total health budget of Liberia is about US$2.3 million out of a total national budget of $44 million. The MOH&SW does not make budgetary allocation for drugs. The total public sector drug expenditure for 1997 could not be accurately estimated because drugs were supplied through NGOs. The National Drug services imported drugs and medical supplies worth $1.3 million. CHAL imported $220,000 worth of drugs and medical supplies. The NDS is financed mainly through EU and UNICEF grants. CHAL funding is both from grants and its own Trust Fund. The World Health Organization brought in emergency supplies in 1996 but does not provide routine support for drugs and supplies purchases. Medecins Sans Frontieres, an international NGO, supplied drugs worth about 1.7 million French Francs (~US$283,000) and medical supplies worth 622,000.00 French Francs (~US$103,000) in 1997 to its Monrovia facility, SwedRelief. UNICEF and other international NGOs brought in drugs or gave grants to local hospitals to purchase drugs and supplies.

Drugs are distributed free to MOH&SW facilities by the NDS. Health facilities supported by NGOs and Christian missions, however, pay for their drugs and supplies and NDS supplies to these facilities with a 20 percent mark up on the catalogue price. It supplied 25 percent of its stock to cash customers like the NGO and mission supported health facilities. The remaining 75 percent went to MOH&SW run facilities. CHAL, on the other hand, supplies drugs to its member institutions at a 25 percent markup and 5 percent service charge on the listed (catalogue) price of the item. Revenue generated from the markup applied by NDS and CHAL is used to supplement their drug procurement budget. The NDS recovered about L$6.0 million from the supply of drugs to its cash customers.

All public health facilities dispense drugs to patients free-of-charge. Patients pay a fee-for-service of at least L$5 for a child and $10 for an adult at all public health facilities. Some facilities charge

higher fees. At most government health facilities, 70 percent of the fees collected is paid to staff as incentive. The remaining 30 percent is shared between the facility and the county health team. In international NGO and mission supported facilities, incentives are paid through donor grants.

The MOH&SW does not operate a revolving drug fund. The Bamako Initiative, however, is seen by the MOH&SW as one of the important mechanisms to improve the health of the people. A revolving drug scheme was in operation before the war. There were efforts then to involve communities in the operation of the scheme. The draft National Drug Policy has a section devoted to the establishment of a revolving drug fund through the NDS and CHAL with support from the government and the involvement of communities.

In general, health workers feel that patients should contribute towards drug costs to set up a revolving drug fund. There are anecdotal reports on increasing use of private health facilities where fees are charged far in excess of the public health facilities. It is said that the Eye Clinic at JFK Medical Center charges L$50-60 for first consultation while the same service in a private clinic in Monrovia costs $360. However, going to this clinic is preferred because of the long queues at JFK. There are also accounts of patients (in both urban and rural areas) taking their hospital prescriptions to private pharmacies to be dispensed. These accounts and observations form the basis for the suggestion that patients must contribute to the cost of health delivery. However, most suggested that a two to three year grace period should be set and that partial and not full recovery attempted initially.

Some private insurance companies provide group health insurance coverage. The health insurance schemes are optional to civil servants that also contribute to the national Social Security Scheme. The private insurance companies offer a combination of life insurance and medical insurance. The medical insurance covers in-patient care only and includes consultations, surgery, drugs, and food and board. Monthly premiums range from L$18.50-33.25. The variation is caused by the insured amount for life insurance. The benefits for the life portion is from L$10,000-27,000 respectively.

Procurement

The MOH&SW does not budget for or import drugs. Drugs acquisition for the public sector is primarily through NDS and the Christian Health Association of Liberia (CHAL). There is no system for monitoring supplier performance. Most drug purchases were done through the International Dispensary Association (IDA) and UNICEF.

Procurement for the public sector is not through competitive tender. The NDS hopes to start this procedure next year. The NDS and CHAL procure drugs listed on the national EDL. The average lead-time for orders from the IDA is about two to three months. Orders passed through UNIPAC in Copenhagen (UNICEF) tend to take up to about six to nine months. USAID's condition that its funds for drug procurement must be utilized through UNICEF or an American company has been problematic for NDS, CHAL, and other USAID supported NGOs.

Procurement is based on a combination of morbidity and consumption methods. The stores management software at the NDS is not used for determining needs because the number of clients is not stable. For example the number of clients has increased from 40 at the beginning of 1997 to

165 by December 1997 and keeps increasing. The NDS has developed a quota system through which supplies to health facilities are determined taking into consideration morbidity statistics supplied by the health facility and its previous month's consumption data. It is a requirement of both NDS and CHAL that requisitions for drugs and supplies are accompanied by morbidity data. This fulfills the Health Information System component of their function.

The NDS does not procure from the private sector in Liberia. Local pharmaceutical manufacture is non-existent. None of the health facilities currently has the capacity to manufacture IV fluids and other extemporaneous preparations. Before the war, the NDS, Phebe Hospital, Curran Hospital and Gbarnga Hospital produced IV fluids. There are remnants of the installations still present after the looting. It should be possible to revive some of these centers, particularly NDS and Phebe Hospital, to re-start production and supplement IV fluid imports.

Logistics

The MOH&SW is not involved with the distribution of drugs and medical supplies. Health facilities collect their supplies from the NDS on a monthly schedule with a lead-time of between one and two weeks. The NDS does direct deliveries to four of the 13 county seats; Phebe Hospital (Bong), Ganta Community Clinic (Nimba), and Liberian Government Hospital (Grand Bassa/River Cess). From these sites hospitals and clinics in the county collect their drugs and supplies. The counties in the southeastern part of the country (Grand Kru, Maryland, and Sinoe) are currently supplied through Children's Aid Direct and Medical Emergency Relief Cooperative International (MERCI). The National Drug Service hopes to establish a sub-depot at Zwedru in Grand Gedeh to serve the southeastern part of the country. Eventually, it anticipates a network of strategically placed sub-depots to serve the whole country.

The availability of essential drugs at health facilities is an important indicator of effectiveness of the supply system. All of the 12 selected tracer drugs were available at the NDS and the CHAL warehouse. During the field trip most facilities visited did not have, on the average, 20.8 percent of the tracer drugs on the shelves in the dispensary. The median number of missing drugs was three; and these were usually chloroquine injection, multivite, and another drug.

Drugs for the treatment of tuberculosis were not available at most of the facilities with tuberculosis programs. Those with drugs had isoniazid/thiacetazone (pediatric dosage), and streptomycin. Only one facility, Phebe, had ethambutol and isoniazid. None of the facilities had rifampicin or pyrazinamide.

Expired drugs were found at some of the facilities but these were mainly donations received from abroad that were near expired on arrival. Excess stocks were found at Phebe Hospital of aminophylline injection, vitamin A, and oral rehydration salt. The aminophylline had expired. Drugs required to be stored in refrigerators were also found on the shelf in the storeroom. Generally, all the storerooms were neat. It was only at Phebe Hospital that stock cards were kept next to the items on the shelves. Arrangement of drugs on the shelves was not in alphabetic order in any of the stores. At the NDS improved stock management has reduced the value of expired drugs from US$25,000 to $500. A monthly list of near expired drugs is generated and these are sold to

private institutions or donated to health facilities.

The NDS staff carryout supervisory visits to all the health facilities they supply drugs to directly and indirectly. During these visits, they check documentation at the drugs and medical supplies stores and also at the outpatients. They also conduct training on stores management and the rational use of drugs. The lack of appropriate personnel and transportation is a constraint in this aspect of their operations. However, they strive to visit each county once every two months.

One of the major constraints affecting the supply of drugs and medical supplies is the poor state of the roads, especially during the rainy season. To address this point requires planning to move stocks as close to the rural areas as possible before the rains. The proposed establishment of sub-depots at selected county seats will contribute to the solution of this problem.

Another major constraint is the absence of trained pharmacists and dispensers in the country as a whole. The few available are all in the private sector where remuneration is much better than in the public sector. There is no pharmacist in any of the government or mission sponsored hospitals. There are no dispensers as well. Those manning pharmacies and dispensaries at health facilities have been trained on the job. The training provided by the NDS monitoring and supervising team is not adequate to address this deficiency. There is the need to train and retain adequate numbers of dispensary technicians, especially for the rural health facilities and pharmacists for the county hospitals and referral centers.

The low salaries paid to government employees is a big disincentive to work in the public sector and more still in the rural areas. The payment of incentives by NGOs to motivate and retain health workers is only a short-term solution. There is a government committee looking into this problem. One side effect of low salaries is lack of motivation and pilfering. The NDS estimates that about 20 percent of drugs distributed can not be accounted for at the user end of the distribution chain.

National Essential Drugs List and Drug Information

A national Essential Drugs List had just been released on March 14, 1998, by the MOH&SW with the support of WHO, UNICEF, and the NDS, and was not yet widely circulated. The drugs on the list are categorized into those to be used at health centers with and without a doctor. Drugs for specialist and referral hospital use are not included in the list. There is also a list of essential supplies. A national committee tasked with the regular update of the EDL has been set up. This committee, the National Drug Policy Task Force, is also responsible for developing the National Drug Policy and revising the Pharmacy Law.

A drug information unit to provide regular information on drugs to prescribers and dispensers does not exist in Liberia. Hospitals do not have drugs and therapeutics committees. Drug education is not included in the curricula of first/second cycle educational institutions. The concept of essential drugs is not included in the curriculum of the only medical school. The School of Pharmacy and the physician's assistant training program at Tubman National Institute for Medical Arts (TNIMA) has it in their curricula. However, the NDS and CHAL organize in-service training for middle level health professionals at which rational use of drugs is one of the training modules. No guidelines

exist on drug promotion by pharmaceutical companies. There are no public education campaigns on drug use. The NDS plans to carry out public campaigns about its functions.

The latest treatment guidelines developed for middle level health professionals is dated 1986 and has not been revised. Copies of the treatment guidelines were available at only a third of 10 health facilities visited. A national formulary does not exist.

Drug Utilization
A formal study on prescribing pattern was not conducted. However, when time permitted, a quick assessment was made of a few important drug-use indicators at health facilities visited. There are about 29 pharmacists in the country, and the public sector currently has only one of these, the chief pharmacist. There is no accurate determination of the number of pharmacy assistants/technicians in the public sector. All functioning hospitals and health centers have pharmacy departments or dispensaries, but they are not staffed by the appropriately qualified personnel.

Presently, there are 37 doctors, 128 physician assistants, 86 registered nurses, 72 LPNs, 72 TBAs, 170 nurses aids, 124 health inspectors and 58 laboratory technicians in government-supported health facilities (Personnel Division, MOH&SW).

At the health facilities visited, the average number of drugs prescribed per outpatient encounter was 3.4 (range 2-5). Antibiotic use at the outpatient clinic was estimated to be 45 percent, 60 percent and 80 percent at three facilities where there was time to review patient record cards. Use of injections was close to 0 percent because of the non-availability of the commonly used chloroquine injection.

The top eight diseases reported to the NDS are: malaria, diarrheal diseases, acute respiratory infections, skin infections, worms, urinary tract infection, anemia, and pelvic inflammatory disease. The top 10 fast-moving drugs are: chloroquine, co-trimoxazole, paracetamol, ferrous sulphate, amoxycillin, mebendazole, acetyl salicylic acid, tetracycline eye ointment, folic acid, and quinine. Seventy percent of outpatients received chloroquine, presumably for treatment of malaria. The NDS does not procure drugs for tuberculosis and leprosy. This is done through a special program.

Quality Assurance
There are no institutions in the country where quality control of drugs is carried out. The NDS used to have a quality control laboratory performing basic tests but this is not functioning now. That unit now prepares stains for microscopy in bulk for distribution to health facilities. The NDS does not use the WHO Certification Scheme on the Quality of Pharmaceutical Products Moving in International Commerce.
Inspectors of the Pharmacy Board and the Pharmacy Division of the MOH&SW inspect private pharmacies. They use a checklist to perform their duties. They have found wrongly labeled drugs, expired drugs and drugs of dubious quality in private pharmacies and medicine stores. It has not been possible to confiscate, test, or penalize offenders of the law.

Private Sector Pharmaceutical Activity

There are 52 pharmaceutical wholesalers and 160 private pharmacies and medicine stores in Liberia. Most of the private pharmacies and medicine stores (132) are in Monrovia. There are no local pharmaceutical manufacturing companies.

Drug prices are not regulated in the private sector. Essential drugs found in private pharmacies and medicine stores were under both generic and brand names. No system exists for monitoring drug prices. There is no incentive for private drug outlets to sell essential drugs at low cost in the private sector although there are no import duties on drugs. The margin between wholesale and retail price can be as high as a 100 percent or more. A few examples are given below (prices are in Liberian dollars):

	Wholesale (1000/tin)	Wholesale (100/tin)	Retail per unit
Ampicillin 250mg capsule	1.95	2.50	5.00
Chloroquine 150mg tablet	0.75	0.90	1.5-2.0
Paracetamol 500mg tablet	0.295	0.50	1.0-1.5

The cost of treatment for malaria in a public health facility was estimated at L$20-25. In the private sector, this cost will be in the region of $35 for treatment consisting of chloroquine and paracetamol for an adult.

In the private sector, all pharmacy shops and medicine stores visited sold ampicillin and metronidazole without a prescription. More importantly, in response to a simulated client's request for advice on treatment for a 2-year-old child with diarrhea, all the 10 shops visited offered metronidazole tablets or suspension. None offered oral rehydration salt.

Priority Intervention Areas

Assure the availability and rational use of essential drugs and medical supplies. Drugs and medical supplies are required in all areas of service provision in the health care delivery system. Their absence affects the efficiency, effectiveness, and quality of services provided. The National Drug Service has succeeded in making available on the average 80 percent of the commonly used essential drugs in most accessible areas of the country. Seventy-five percent of NDS supplies go to government-supported health facilities. The remaining 25 percent are taken by mission and NGO supported health facilities. This effort has been complemented to a large extent by the activities of CHAL and some international NGOs. The funding for drugs and medical supplies to NDS is from the European Union and UNICEF. Drugs and medical supplies are given to government health facilities free of charge. By charging for drugs supplied to NGO and Christian mission sponsored clinics and hospitals the NDS has been able to recover some revenue. CHAL also operates a revolving drug fund. The NDS has operated in this manner without any substantial contribution from the MOH&SW. It has also enjoyed freedom from political interference primarily because of its autonomy from government and NGO status. It is significant that the draft National Drug Policy advocates this type of structure as the mechanism to address the supply of essential drugs to the people of Liberia.

Financial support from the EU and UNICEF is not likely to be indefinite. It is also not likely that the MOH&SW can make substantial contribution to NDS in the event of the withdrawal of the EU and UNICEF. Indeed, should external support diminish in a situation where the MOH&SW controls the NDS, the national drug supply system is likely to fail without overwhelming budgetary support to the NDS from the government. The NDS should be encouraged to explore other means of improving its own revenue base. Extending cost recovery to government supported health facilities is an option that under discussion. **It is very important that the NDS retains its autonomy and NGO status.**

USAID should provide assistance to ensure that:

- NDS is supported to improve its planning, stores management, training, and monitoring and supervisory capacity. It should also be assisted to plan towards being self-sustaining.
- CHAL is supported to improve its planning, stores management, training, and monitoring and supervisory capacity. This will enable it to better compliment the activities of the NDS.
- The NDS is assisted to open sub-depots at county level to facilitate distribution of drugs and supplies to rural areas especially during the rainy season.

In addition:

- The government must contribute to the cost of drugs supplied to its health facilities with the view of establishing a cost recovery mechanism to establish a revolving drug fund.
- USAID should review its own policy on sources of drug procurement with its grants to NGOs since procurement through UNICEF has been associated with unusually long delays.

In particular, the support for training activities should focus on providing in-service training to middle level health workers in the rural areas. Emphasis must be placed on stores management, rational use of drugs including communicating with patients, and good dispensing practices. This may be done through strengthening both NDS and CHAL to undertake these activities. Further support may be given to the health training institutions of these health workers to revise or develop their curriculum as well as provide them with training materials.

Assist the government of Liberia to establish the necessary policies for the pharmaceutical sector. The war disrupted the development of a number of policies in the health sector. A draft National Drug Policy was prepared in 1992. This is yet to be finalized or discussed and a consensus had not yet been reached before final adoption as a national policy. It is important that the process is completed as soon as possible to provide the necessary framework for the development of the pharmaceutical sector.
A National Drug Policy is necessary to ensure better coordination and serves as a reference guide for all future national pharmaceutical development activities. It is a government's declaration of its intention to make essential drugs available and accessible to the population at reasonable cost; and to ensure the safety, efficacy, and the quality of drugs and their rational use by prescribers, dispensers, and consumers.

The various elements of the policy usually include legislation and regulatory control, local

manufacture, rational drug use, selection of essential drugs, estimation of drug requirements, procurement, storage, distribution, financing, quality assurance, herbal medicines, coordination, technical cooperation and policy monitoring and evaluation. It is aimed at identifying and developing necessary strategies to accomplish the required objectives. In formulating the elements of the policy, due attention should be given to available resources, disease patterns and their management, and the socioeconomic environment.

The policy should also be inherently flexible to accommodate future developments and changes in the pharmaceutical sector. The policy may also form the basis for revising existing pharmacy laws. Indeed, Liberia's Pharmacy Law is dated 1976 and requires revision to reflect current internationally acceptable practice of pharmacy.

The World Health Organization has traditionally assisted developing countries in preparing their national drug policies. The World Bank as part of its support to the health sector in developing countries has also supported such activities. These institutions and others may be used as partners in accomplishing this task.

Therefore:

- USAID should seek partners in the international health community to assist the GOL complete the process of formulating an appropriate National Drug Policy and also assist in the review of the Pharmacy Law.

Assist in re-establishing a national drug-testing laboratory. Before the war, NDS had a laboratory that did basic testing of pharmaceuticals. This is an important part of the process of assuring the quality of imported drugs and locally manufactured drugs. This facility is important in the light of the policy decision to buy generic drugs. Since the sources of generic drugs cannot always be assured and there is a high risk of importation of fake drugs into the private sector in Liberia's present circumstance, a facility of this nature will help remove drugs of dubious quality from the market.

A quality control laboratory will be of importance to the MOH&SW, the Pharmacy Board, the NDS, and other organizations involved in the pharmaceutical business. It is very important that all stakeholders participate in the decision on the siting of such a unit and its relationship with all interested parties. The WHO has supported the setting up of quality control laboratories in developing countries. USAID, through its health projects, has also supported some developing countries in setting up quality control laboratories. Some developing countries have used revenue derived from drug registration and pharmaceutical company registration to support the activities of the quality control laboratories.

The setting up of the laboratory notwithstanding, the inspectorate unit of the Pharmacy Board requires strengthening with adequately trained inspectors backed by appropriate logistical support to enable the unit to be efficient and effective.

In this regard

- USAID may wish to provide short-term technical assistance to the GOL to assist in designing appropriate mechanisms for ensuring the quality of drugs imported into and circulating in the country.

APPENDIX III

REPRODUCTIVE AND CHILD HEALTH

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Liberia began to institute integrated primary health care in clinical and community services prior to the war and the MOH&SW is committed to revitalizing this effort. The assessment team reviewed current and planned activities in reproductive health including family planning, sexually transmitted infections and HIV/AIDS, safe motherhood, and female genital mutilation. Child health was not part of the original scope of work for the assessment, but the team felt that it was an area of need and one in which USAID has traditional strengths. Therefore the team member for reproductive health also gathered information on immunization, acute respiratory infections, diarrheal diseases, malaria, and nutrition/weaning. Emphasis in these two areas of primary health is supported by the MOH&SW Action Plan for the Revitalization of the Health Sector (1997), which lists developing and strengthening reproductive health and child health services as two of the seven priority activities.

FAMILY PLANNING

Background

Although GOL support for family planning (FP) existed before the war, services, especially through the public sector, were limited and utilization was low. The 1986 DHS showed an estimated 72 percent knowledge of family planning among married women of reproductive age, yet contraceptive prevalence for modern methods was only 7 percent and total fertility was 6.5. The majority of clinic-based services were provided through the Family Planning Association of Liberia (FPAL), which had 5 clinics and 42 outlets in 10 counties. FPAL had also integrated FP services into four MOH&SW clinics just prior to the war. Some services through private practitioners were available in urban areas. Community-based distribution (condoms, vaginal foaming tablets, and a resupply of oral contraceptives) had been initiated in Monrovia through FPAL with support from Pathfinder before the war.

USAID had supported a number of activities through the mid-late 1980s: population policy development; service delivery through FPAL (outreach through field workers) and the Christ Pentecostal Church; a natural family planning activity with the National Catholic Secretariat; training of public sector nurses, midwives and physician assistants in FP service delivery and IEC; commodity supply; training for rural health workers in IEC for FP; and in-service training of physicians in reproductive health.

Since 1990, virtually the only source of FP services in Liberia has been FPAL's Monrovia clinic, which restarted operations in 1994. However, a number of international NGOs who are providing support to revitalize MOH&SW clinics are beginning to integrate FP services using contraceptives supplied through FPAL. Family planning information and counseling has traditionally been part of antenatal care in Liberia but not included in regular post-natal care.

Demand

Health workers and MOH&SW staff met during the assessment feel that there has been a significant increase in demand for FP services since the war began. All public and PVO-sector health program personnel interviewed expressed that there is a strong opportunity to increase the use of family planning in Liberia at this time. They report that families who were unable to feed and otherwise care for large numbers of children during the war are now interested in family planning. However, they also report that people are voicing a desire to "replace" children lost in the conflict. Nonetheless, clinics and other facilities are experiencing increased requests for services, which are constrained by the limited supply of contraceptives.

Oral contraceptives (both combined and progestin-only) are the most frequently used form of modern contraception, followed by the injectable, Depo-Provera (DMPA). Many providers feel that the use of DMPA would be greatly increased if adequate and regular supplies were available (see below) and report that the method has become very popular since it was introduced last year. However, many clients who began using DMPA have had to switch to oral contraceptives when DMPA supplies ran out. Condoms are increasing in popularity and are being requested by both women and men, but most providers feel that they are being used more for disease prevention than for contraception. IUDs (primarily available through FPAL) and vaginal foaming tablets are available but providers report low demand. All persons talked to during the assessment report a historically low demand for permanent female contraception (minilaparotomy) and almost non-existent demand for vasectomy services.

Supply

Contraceptives are not currently supplied through the National Drug Service. Clinics/hospitals etc. are receiving commodities directly from FPAL. FPAL has been getting condoms from the National AIDS Control Program, oral contraceptives (one high dose combined pill, two low dose combined pills, and one progestin-only pill) and vaginal foaming tablets from IPPF, and IUDs and DMPA from UNFPA. Supplies are limited and FPAL reports that their 1997 stock of over 9,800 doses of DMPA is completely exhausted. This was confirmed on the team's field visits, where two clinics in Lofa County were the only ones that had DMPA, and then only about five doses each. There are some condoms, oral contraceptives, vaginal foaming tablets, and possibly DMPA available in the private sector through pharmacies, but at prices that are prohibitive for most Liberians. There appears to be scope for a revitalized community-based distribution program working through trained traditional midwives, community health workers, and other distributors. In addition, the fact that a tradition of paying for health services and supplies that is still in place would indicate that social marketing has promise as an additional channel of contraceptive supply. In fact, USAID was considering initiating a social marketing activity when the war broke out.

Permanent contraception is available in the form of minilaparotomy and vasectomy. Where hospital

services are up and running and trained physicians available, minilap is theoretically available. However, in practice this service had been limited even before the war to the currently non-functioning JFK Medical Center in Monrovia.

As part of a comprehensive activity to revitalize reproductive health services in Liberia over the next 15 months, UNFPA has agreed to provide a stock of pills (one combined and one progestin-only), condoms, DMPA, IUDs, and vaginal foaming tablets to be distributed nationally via the National Drug Service over the next two years. They will assist NDS to procure, store and distribute these contraceptives to both public and private/PVO sector facilities. In addition, they will train and equip physician-nurse teams in eight counties (Nimba, Margibi, Bong, Grand Cape Mount, Grand Bassa, River Cess, and Montserrado) to provide minilaparotomy services. As there are no reliable statistics to indicate potential demand, it is not clear whether the quantities of commodities being provided by UNFPA will be sufficient. With this in mind, UNFPA has ordered half of the supply and will adjust the second order based on more information about actual demand. However, UNFPA believes that the proposed supply of condoms will be inadequate for both family planning and STD/HIV prevention. FPAL is exploring the possibility of receiving contraceptives from IPPF but competing budget priorities may force them to limit their commodity request.

Policies/Guidelines
Liberia has a National Population Commission and a population policy, developed with assistance from USAID (Futures/RAPID and Pathfinder) in the mid-1980s. The assessment team was not able to locate a copy for review. The country does not have a specific family planning policy, nor are there national guidelines for family planning service delivery. Many institutions have unofficially followed FPAL/IPPF guidelines.

Training
Pre-service training of health workers who provide family planning services or education (primarily certified midwives, nurses, physician assistants, and trained traditional midwives) was halted during the war and only one institution, the Tubman National Institute for Medical Arts, has resumed teaching. In addition, virtually no refresher or in-service training has been available for eight years other than piecemeal efforts by NGOs. Revitalization of pre- and in-service training programs will need to address curricula needs, support to training institutions, and support to health facilities where students do their clinical practicums.

The pre-service curricula for certified midwives, registered nurses, and physician assistants include family planning but reference materials and the curricula date from 1987 and should be strengthened and brought into line with current internationally accepted information. A revision of these curricula was done in 1995 but unfortunately all copies of the revised materials were looted before they could be printed. A review of the 1987 curricula revealed strong use of adult participatory learning methodologies and reasonable teaching and clinical time allotted for most family planning-related topics. Training materials for trained traditional midwives are being revised and it is not clear how much family planning information is included. The curricula for pre-service training of physicians at the Dogliotti School of Medicine has not been revised in 30 years but there is a section on family health in which family planning could be incorporated.

No in-service training material was available for review. It was not clear whether coordinated, standardized in-service training existed prior to the war. Various donor projects and NGOs provided occasional refresher activities. In addition, no in-service family planning training material was available for review by the assessment team. Specific suggestions for strengthening training in family planning are in the recommendations section.

There is an urgent need to provide a contraceptive technology update to all health workers, from physicians through TTMs. The priority cadre for family planning training is certified midwives, as they are the primary providers of FP services at the clinic, health center and hospital levels. Providers interviewed during this assessment exhibited out-of-date knowledge of indications and precautions for hormonal contraceptives and need further information to avoid medical barriers to contraception. In addition, the widespread use of Ovral (.5 mg Norgesterel, .05 mg ethinyl estradiol), even for first time users, also indicates a need for updated information. Mid-level providers are trained to insert and remove IUDs in their basic training but as utilization of this method is so low, it can be assumed that most will have lost these skills. Any effort to revitalize IUD services should include assessment and possible retraining of providers. UNFPA's new reproductive health activity includes in-service training for TTMs, nurses, and midwives working at the county level (in counseling, contraceptive technology, and infection prevention), and nurses and midwives at referral hospitals (in comprehensive reproductive health). They plan, where possible, to use existing MOH&SW materials that will be reviewed and revised. County health officers, MOH&SW central-level administrators and managers, and private medical practitioners also need a contraceptive technology update.

Counseling

There was no opportunity to assess providers' counseling skills. However, it is assumed that myths, rumors, and provider-bias exist in Liberia as they do in all other countries. Counseling, interpersonal communication and health education are included in pre-service education for all mid-level providers and students have both theory and clinical practice. However, as with contraceptive technology, there has been no opportunity to introduce new thinking and techniques developed over the past 8 to 10 years. While updates in contraceptive counseling are specific to family planning service delivery, strengthening of the interpersonal communication skills of health workers will benefit all programs.

Infection Prevention

Infection prevention is important in the provision of quality health care and of course is not limited to family planning services. Efforts in this area are greatly hampered by the level of destruction in most health facilities. Hospitals have attempted to resurrect sterilization systems, mainly using steam sterilizers heated over an open flame. Most hospital autoclaves were destroyed. Some facilities reported practicing decontamination of instruments using commercially available disinfectant solutions. The use of chlorine bleach solution for decontamination is not practiced. Disposal of infectious waste is a problem as incinerators, where they existed, were also destroyed or, if left intact, are unusable due to the lack of electricity. At the clinic level, use of suitable sharps and infectious waste containers, hand washing, and proper disposal of clinic waste need

strengthening. A recent WHO/MOH&SW assessment of the EPI program also noted weaknesses such as a lack of proper sharp disposal containers and practices of two-handed recapping and bending used needles. Again, Liberian health workers have not had the opportunity to benefit from the recent advances in knowledge and practice in this area.

Information Education and Communication (IEC)
IEC materials for all health programs are almost completely non-existent as whatever there was before the war was destroyed and the government and others do not have sufficient budget or manpower to design and print new materials, buy radio-time, etc. The IEC Division of the MOH&SW previously coordinated the development and production of all health IEC materials for the country in order to insure standardization of messages. However, the division currently lacks the resources to resume that role. The Family Planning Association of Liberia produced and delivered IEC through field workers and youth programs in the past but currently have only been able to produce a few posters (which the team did see in facilities around the country). Health workers and MOH&SW officials stressed the need for IEC activities and materials at all levels and noted the need to reach rural audiences with messages in local languages and for non-literate persons as well as to explore the potential use of rural radio as a message medium. UNFPA hopes to assist with the development of national IEC materials and print and disseminate them to the extent that their budget allows.

Other Areas of Concern
Almost all persons interviewed spoke of an increase in teen pregnancy and the need to reach adolescents with family planning messages and services. UNFPA is supporting the reactivation of Family Life Education in schools and FPAL hopes to reactivate their peer educator and service delivery program for in- and out-of-school youth (they have submitted a proposal to UNFPA that is likely to be funded). Encouraging greater male involvement in family planning was also mentioned as an area that needed attention.

The need for information and access to emergency contraception was also mentioned, especially in light of continued social upheaval and the vulnerability of many women to sexual abuse and violence. The current practice is to induce menstruation through expensive injections of high dose progestins.

STDs/RTIs AND HIV/AIDS

Background
This area was consistently mentioned by health workers, MOH&SW staff, international NGOs, and all others interviewed as a major concern for the country and a priority for donor support. As of December 1997, there were 315 HIV positive and 70 confirmed AIDS cases reported to the National AIDS Control Program (NACP). The NACP believes that these numbers represent only a fraction of true infections in the country, particularly as the war has created a ripe environment for the spread of STDs and HIV/AIDS. Large segments of the population have been displaced, both internally and to neighboring countries (including to Côte d'Ivoire where there is an HIV prevalence of 10-12 percent). Women have become more vulnerable to sexual violence and abuse.

Fighting forces have been moved around the country and have had the potential to engage in high-risk behavior. Preventive and curative health care for sexually transmitted diseases and reproductive tract infections has been virtually non-existent.

Trends in HIV seroprevalence (age-standardized) among all populations show a steady rise from 3.9 percent in 1994 to 6.2 percent in 1997, with consistently higher rates for women and rising prevalence in rural areas. AIDS cases are almost equally divided between men and women, but it is notable that the mean age for the women is consistently lower than for men. There are no current figures on STD prevalence, but health workers around the country report an increase in female and male clients reporting both a history of STDs and current complaints. Laboratory testing for STDs/RTIs is virtually unavailable.

The National AIDS Control Program was established in 1987, supported by the WHO/Global Program on AIDS. It ceased operations when the war broke out in 1989 and was revitalized in 1993 with limited activities in Monrovia. It was restarted in August 1997 and is expanding to include IEC, blood safety and STD management activities in other areas of the country. The NACP manages the following programs: information, education and communication; STD/HIV/AIDS epidemiological surveillance; blood safety; STD management; and counseling and care of persons with AIDS. Funding for current NACP activities is provided through the UNAIDS Theme Group, the European Union and a small contribution from the MOH&SW. However, the program appears to be under-funded given their planned activities and the reported explosion in STDs and high potential for increased HIV infection.

Policies/Guidelines

The consultant reviewed the national policy guidelines for the prevention and control of STDs and HIV/AIDS. They were revised in 1994 and include provisions for testing, counseling, education, surveillance, and reporting of HIV and AIDS cases, including confidentiality at all levels. NACP plans to revise these guidelines and include updated human rights, legal and ethical issues. NACP is also advocating for public GOL recognition of HIV/AIDS as a critical national problem.

Testing/Surveillance

Testing for HIV and STDs/RTIs is not widely available due to both lack of test kits and functioning health facilities with necessary lab support. Where testing is available, it is limited to the HIV Spot Test, with confirmation using another rapid screening test (HIV Capillus). Sensitivity and specificity of these tests has not been determined for Liberia. NACP reports that they train lab technicians in pre-test counseling. Liberia also currently has no ability to screen pregnant women or others for syphilis and extremely limited facilities to test for gonorrhea and other specific STDs/RTIs.

HIV sentinel surveillance is currently carried out at 16 sites around the country and includes both general population groups (blood donors, US visa applicants, ante-natal clinic attendees) and those who may be considered more high risk (hospital in- and outpatients with suspected clinical signs of AIDS, persons presenting voluntarily for testing, TB patients). NACP acknowledges that this mixing of populations may be skewing prevalence results but notes that the upward trend in HIV

prevalence holds true in blood donors, who represent the largest proportion of those tested. At Phebe Hospital in rural Bong County, testing of 1,039 blood donors over a one-year period (1997-1998) yielded 2.9 percent positive for HIV. STD surveillance is currently being re-established with sites in six to seven counties. However, health facilities report an increase in visits for STDs.

STD/RTI Case Management/Training
NACP is focusing on the comprehensive management of STDs, HIV and AIDS and is developing training materials that combine these areas. Most health personnel have not been trained to diagnose and treat STDs, RTIs or AIDS. However, officials feel that gonorrhea, chlamydia and syphilis are major problems. NACP has just developed guidelines for syndromic diagnosis of STDs (based on WHO guidelines) and have started training physicians, physician assistants, nurses and midwives in their use. They are also revising reporting forms to reflect the syndromic classifications. As these new guidelines and training materials were being printed during the team's visit, it was not possible to review them. Even with increased ability to diagnose STDs/RTIs using these guidelines, health officials worry that STD strains in Liberia are showing resistance to the currently available drugs and are specifically concerned about penicillin-resistant gonorrhea. Drugs commonly used to treat most STDs/RTIs are on the Essential Drug List and available through NDS.

NACP is also liaising with TNIMA and the Dogliotti School of Medicine to be sure that revisions of their curricula include up-to-date and consistent information on STDs/RTIs and HIV/AIDS. They have also drafted a curriculum with the Ministry of Education to provide prevention education for junior high and high school students. They are also training health workers, including TTMs, in infection prevention. UNICEF also reports plans to provide some support for training in STD/HIV prevention education targeting youth peer counselors and nurses, TTMs, and sex workers in three counties.

International Education and Communication
NACP's IEC activities include: training for teachers, in- and out-of-school youth and community leaders in STDs/RTIs and HIV prevention; producing general messages for STDs/RTIs and HIV prevention in the population and targeted messages for refugees and pregnant women; and training of commercial sex workers in STDs/RTIs and HIV prevention. They are also working with a local NGO, the National Association for Traditional Practices that Affect the Health of Women and Children (NATPAH), to provide education about female genital mutilation and its relationship to HIV infection. NACP's current budget limits the scope of these activities and the number of materials produced and distributed. They hope to develop a program to support community-based care of persons with AIDS but lack the skill and human and financial resources.

Condoms
NACP has a limited supply of condoms provided by WHO, UNFPA, and MSF. They distribute these directly to NGOs and others who request them and are also preparing condom boxes for distribution to hotels, nightclubs, seaports, etc. However, increasing demand, a change from pre-war attitudes, exceeds the available supply. NACP believes that it is not feasible to continue providing condoms for free. Population Services International is developing plans for a pilot HIV/AIDS prevention social marketing program targeted in and around Monrovia that will include sale of condoms with accompanying IEC. Several health professionals interviewed expressed an interest in the female condom and felt that there might be a niche for it in Liberia.

SAFE MOTHERHOOD

Background
Liberia has had a strong tradition of providing safe motherhood services through both trained traditional midwives and nurse midwives (certified midwives and RN midwives). Pre-war services included antenatal care (83 percent of pregnant women had antenatal care–1986 DHS), tetanus toxoid (TT) injections (35 percent coverage–1986 DHS), assisted deliveries (50 percent of deliveries were assisted by a doctor or nurse/midwives–1986 DHS), and emergency obstetrical care capacity in most counties.

Current Situation
Destruction of health care facilities (clinics, health centers, and hospitals) and lack of trained staff and equipment/supplies meant that caesarian sections and other emergency obstetric procedures were not available to most women during the war. This resulted in a rise in already high maternal mortality rates. While reliable national maternal mortality figures do not exist, in 1990 the maternal mortality rate was 560 per 100,000 live births (UNICEF), while a 1993 study in five major hospitals in Monrovia (see UNFPA Project Agreement) yielded a figure of 1,060 (MOH&SW estimates for similar time frames are half as much). In addition, health workers report an increase in teen pregnancy and its related obstetrical problems and a rise in ectopic pregnancies caused by pelvic inflammatory disease.

Abortion is illegal in Liberia. However, the war conditions led to an increase in unwanted pregnancies and women sought abortions, often from untrained "quacks" using unhygienic procedures. Even where treatment by trained physicians of post-abortion complications (including complications from incomplete spontaneous abortions) has been available, dilation and curettage has been the preferred method of care, and the less invasive procedure of manual vacuum aspiration has not yet been introduced. The 1993 Monrovia study found abortion complication to be the most common cause of maternal death (37 percent).

Basic antenatal care (ANC) is available at reactivated clinics and hospitals and through TTMs at the community level. Tetanus toxoid is provided through the EPI program and UNICEF provides iron folate through the NDS. Health workers report that they provide antenatal that includes exams, nutrition education, and family planning counseling. Postnatal care (PNC) is much weaker and there appears to be confusion about what this service should include. For example, linkages to

family planning services are not traditionally part of PNC. There is a need to review and strengthen ANC and PNC services and make sure that they are available in all health facilities and through community-based workers such as TTMs. UNICEF, UNFPA, and WHO are supporting activities in these areas in their target counties.

UNICEF/UNFPA/WHO are spearheading an effort with the MOH&SW to strengthen all levels of emergency obstetric care in five counties: Nimba, Margibi, Grand Cape Mount, Grand Bassa, and River Cess. Activities will include community-based training of women and youths in health topics; refresher training for 600 TTMs and provision of locally assembled delivery kits; in-service training of nurses and midwives working at the county level (one per health facility) in recognition and referral of obstetric or abortion complications and provision of imported delivery kits; establishment of functional emergency obstetrical care units in county hospitals with support for infrastructure, drugs and supplies, trained staff, equipment for instrumental deliveries (including Caesarian section, resuscitation of newborns, and manual vacuum aspiration for management of post-abortion complications), laboratory, and blood transfusions support services; strengthening of JFK Medical Center, Phebe Hospital, and possibly Redemption Hospital services/staff so that they may be used as emergency obstetric care training centers and referral hospitals for county hospital teams; and strengthening of the National Drug Service's ability to procure, store, and distribute essential reproductive health equipment and supplies.

The team was unable to clarify if the UNFPA/MOH&SW activity including training and equipping non-physicians (physician's assistants, nurse midwives, certified midwives) working at the health center level to provide obstetrical emergency life-saving procedures. Several health professionals expressed a need for this, especially in the rural areas, as physicians are still scarce and women have limited access to existing or planned emergency obstetric care services. WHO is also providing assistance in Lofa, Nimba, Margibi, Grand Bassa, and Bomi/Cape Mount counties to train certified midwives and physicians in the use of the partograph.

A review of available training materials indicates that pre-service training in antenatal care, delivery, and postnatal care for physician's assistants, registered nurses, and nurse midwives is strong and includes education about nutrition, TT provision, family planning counseling, warning signs in pregnancy, normal and problem deliveries, when to refer, etc. As with family planning, it was unclear whether standardized nationally used refresher training materials for these topics exist. However, UNFPA is using MOH curricula, which they have reviewed. As above, there were no available copies of the revised TTM curricula available for review by the assessment team. However, UNFPA has reviewed this curricula and will be using it for the TTM training.

Liberia does not have a national safe motherhood policy or guidelines, both of which would be useful in defining and promoting activities in this area.

FEMALE GENITAL MUTILATION (FGM)

Prior to the war, a local NGO, National Association for Traditional Practices Affecting the Health of Women and Children (NATPAH), was addressing the issue of female genital mutilation through advocacy and education. The practice, usually clitorectomy, is most often performed around puberty. It is widespread but most prevalent in Lofa, Bong, Nimba, Cape Mount, and Bomi counties. Health problems and deaths related to FGM include sepsis and tetanus from use of unclean cutting instruments, hemorrhage, and extensive scarring resulting in complications during labor and delivery. NATPAH had submitted a proposal to UNFPA before the war for support of its educational activities but this has been on hold. As above, the National AIDS Control Program is working with NATPAH on education about the HIV transmission implications of FGM.

Child Health

Liberia's infant mortality rate has remained consistently high at 144 per 1,000 live births between 1981-86 (DHS–1986) and 157/1,000 in 1996 estimates. Similarly, under-five mortality rose from 220/1,000 in 1986 to 235/1,000 in 1996. The leading causes of infant and child morbidity are malaria, diarrheal disease, and acute respiratory infection. While child health services have always been a part of primary health care, there is a move toward strengthening integrated case management of these and other childhood diseases.

Expanded Program on Immunization (EPI)

EPI is getting more attention than other child health services as the MOH&SW, with support form UNICEF, tries to keep the cold chain functioning and expand program coverage. UNICEF is providing both vaccines and cold chain equipment as well as training for county health teams in management of the EPI program. An EPI policy was developed in 1993 and the national vaccination schedule follows WHO recommendations. The policy targets children under three and women of reproductive age (14-49). However, as EPI coverage was weak for several years, the target group for children has been raised to include all children under five years. A recent WHO/MOH&SW assessment of the EPI program found that while health workers were aware of the policy and vaccination schedule, supervisors and managers need to be refreshed in this area.

Acute Respiratory Infection (ARI)

A national policy and program for acute respiratory infections were discussed in 1992-93 but was not developed at that time. As ARI is one of the leading causes of childhood mortality and morbidity in Liberia, it is a critical area for attention. Treatment drugs are widely available through NDS. However education for caretakers on the signs and symptoms of ARI needs to be undertaken in order to promote timely referral to health facilities.

Control of Diarrheal Diseases (CDD)

The national control of diarrheal disease program has not functioned since before the war. A national policy was developed with support from the USAID-funded CCCD project but it should be reviewed and revised if necessary. The consultant was not able to review a copy of the policy. Use of oral rehydration therapy was low before the war while inappropriate use of antibiotics and

other drugs was rampant. However, the almost complete lack of government and other health services during the war led to an increased use of home-based oral rehydration solutions. Health workers feel that people now recognize ORS's value. Continued education on the prevention of diarrhea, particularly the link to water and sanitation activities, is necessary.

Malaria

Malaria continues to be the leading cause of morbidity among children and adults in Liberia. There is a national policy that should be reviewed and revised if necessary. The consultant was not able to review a copy. Treatment drugs are available through the NDS, although health workers would like to increase the availability of testing equipment in order to verify infection. Efforts to prevent transmission include support from UNICEF for impregnated mosquito nets, to be reinstated in 1999.

Nutrition/Weaning

The acute child malnutrition seen during the war is diminishing. Therapeutic feeding centers are closing but the relief organizations that managed them are training health workers in MOH&SW facilities in growth monitoring and identification and treatment of more moderate levels of malnutrition. Community members are also receiving education on nutrition. Infant nutrition is supported by widespread breastfeeding, which has been supported in the past by a Breastfeeding Action Group. However, health workers report that further education is needed on the definition and importance of full breastfeeding, the timing of weaning, and proper weaning food.

Vitamin A is available through the National Drug Service for use in treatment of measles and there is discussion about providing regular supplementation to children and pregnant women. The MOH&SW is also concerned about iodine deficiency and would like to do a national study in this area.

RECOMMENDED PRIORITY INTERVENTION AREAS

There is a unique opportunity in Liberia right now to respond to an increased demand for family planning services, an urgent need for expanded STD/RTI services, and a desire to define and integrate reproductive health services within the public and PVO sectors. USAID should assist the GOL to make quality RH services as widely available as possible, with an emphasis on the clinic and community levels supported by county referral hospitals. At the same time, a limited investment in support for strengthening of child health programs to complement other donors would be a good use of USAID funds and expertise.

- *Assist the MOH&SW at the national level to review, revise and develop (where necessary) national policies and service delivery guidelines for reproductive and child health in Liberia, including family planning, safe motherhood, ARI, CDD, and STD/HIV/AIDS.* There is an urgent need for national policy and service delivery guidelines to lead the revitalization of primary health care services. Where policies existed prior to the war, they would benefit from review and revision in order to reflect changes in international knowledge and practice. For those areas where policies did not exist, the process of developing them will help define

activities and priorities. Service delivery guidelines for all health interventions should be developed, or be reviewed and updated if they previously existed. These should then serve as the basis all IEC messages, and for pre- and in-service training materials for health workers. The process would also serve as one way of providing updated technical and program information to senior MOH&SW managers.

USAID assistance in this area could be accomplished with targeted short-term technical assistance through the Global Bureau PHN partners with expertise in the various health topics.

- *Assist the MOH&SW, TNIMA, and other training institutions to review and strengthen pre- and in-service training in reproductive and child health.* It is suggested that priority be given to the certified nurse midwives, registered nurse midwives, physician assistants, and traditional midwives as these cadres traditionally provide reproductive and child health education and services. However, once modules are strengthened for these groups, they could be fairly easily adapted and expanded for physician training. A review of areas for strengthening should include:

  - Update of technical information, both medical and counseling/IEC;
  - Integration of revised national policies and guidelines;
  - Update/review of classroom and clinical practicum teaching methods;
  - Use of anatomical models in training;
  - Use of learning guides and checklists to assess competency in specific skills;
  - Guidelines for clinical practicums;
  - Consideration of developing a comprehensive reference manual to accompany the RH/CH module (i.e., as opposed to a list of reference materials to be consulted by students during the course).

  In addition, support to the institutions that train these groups should include technical update training for all instructors, teaching skill strengthening for all instructors, replenishment of anatomical models, and other teaching aids (overhead projectors, etc.) lost during the war, and support for national printing and distribution of revised teaching materials. Support of service delivery in facilities where students do their clinical practicums is also necessary. USAID should also support MOH&SW efforts to insure that all partners in the health sector (local and international NGOs, donors, etc.) use the same training materials and have been properly trained in their use.

- *Support the MOH&SW at the national level for development and distribution of IEC materials for RH/CH.* The development of standardized IEC messages and exploration of a variety of delivery mediums should be supported. This is another activity that would follow from work on national policies and guidelines.

- *Support and complement the UNFPA/UNICEF/WHO reproductive and child health service delivery and training activities with the MOH&SW.* USAID should work closely with other major donors in support of service delivery activities. If working in the same geographical areas, USAID should reinforce these activities. If working in counties uncovered by the UN program, USAID should consider replicating their activities to the extent possible. One specific area in which USAID has expertise and could provide support is piloting of community-based distribution of family planning in rural areas.

- *Possible support to procure additional supplies of condoms and DMPA.* In consultation with UNFPA and the MOH&SW, USAID should consider providing additional supplies of condoms and DMPA for Liberia.

- *Support a national social marketing intervention aimed at increasing use of condoms for both family planning and disease prevention.* There appears to be a niche for social marketing in Liberia and there is certainly a need for the kind of blanket coverage such programs can achieve in education and commodities. The program could initially focus on increasing use of condoms for both family planning and STD/HIV prevention but also look at prospects for adding other products.

APPENDIX IV

WATER AND SANITATION

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CURRENT SITUATION

Water

Over most of the country, a water table at between 10 and 20 meters allows for the construction of hand dug wide diameter wells. There are a significant number of unlined family wells in most communities. The emphasis of donors, NGOs, and other emergency actors has been on the construction of hand dug wells lined with 90 cm concrete rings or "culverts." These protected wells have a concrete lid on which is placed a hand pump. There a four basic hand pumps being installed. Three of them were being installed before the war: Kardia (German), Consellan (UK), and Vergnet (France) and there exists a certain amount of technical expertise in country for repair. Costs of these pumps vary between US$1,200 and 1,500. Spare parts are very hard to locate and may often be from looted pumps. The fourth hand pump is the Afridev being installed through UNICEF projects. Its basic cost is around US$260, and it requires the most VLOM (village level operation and maintenance) of the four hand pumps. Maintenance has not yet been a major issue, due to the recent installation of most of the pumps. Costs of long-term maintenance are hard to estimate as there are no mechanisms yet for the sale of spare parts, but average annual maintenance costs for these hand pumps are usually judged to be affordable to most rural communities that exist in normal, peaceful economies. At this point, where many rural communities in Liberia have not even yet collected their first harvest and there is really very little money in the community, it is likely that assistance will still be needed at least for the purchasing of spare parts.

It is interesting to note that the four hand pumps installed are considered deep well hand pumps (that is, water level between 20 and 50 meters). Shallow well pumps (less than 20 meters) exist on the world market that are cheaper to purchase and maintain, such as the TARA pump, which would seem more appropriate for most wells encountered in Liberia. Those directly involved in the hardware aspects of rural water supply should analyze the benefits of bringing in a fifth type of hand pump, against the burden of creating another spare parts distribution network and training technical personnel in yet another type of pump.

It seemed widely accepted at the community level that water from the hand pump was more potable than from an unprotected well. A fairly wide program of well chlorination had been carried out. This helped prevent major outbreaks of severe diarrhea or cholera. This approach seems to be well accepted and is particularly important for unprotected wells. UNICEF recommends periodic pro-active chlorination three times a year (at the beginning of the rainy season, in the middle of the rainy season and in the middle of the dry season). Training materials were also developed for

chlorination of drinking water at the household level.

The approaches adopted for emergency-type interventions in the rural water supply sector, may cause some difficulties for sustainable community water systems, as the country progresses towards more normal development. These problems include:

- Many of the wells were completed during the rainy season and have dried out towards the end of the dry season, due to the difficulty in reaching an appropriate depth during the rains and pressure to make available potable water to the returning communities as soon as possible.

- Various approaches were adopted for community participation in construction activities, from no community participation (turn-key, perhaps with paid community workers) to extensive community participation in construction tasks (including collecting sand and gravel, making the concrete well rings in the villages, assisting in the excavation, etc.). In nearly all cases, the community was required to lodge and feed the external technicians.

- During field visit, some cases were noted where different types of hand pumps were installed in a single community, probably due to project funding being approved in Monrovia at different times for the various agencies and organizations working in the construction of rural water supply systems and lack of county-wide co-ordination

- Little maintenance and repair training activities occurred, even though there is apparently a pool of trained private sector technicians from before the war that are gradually returning home. Minimal training of pump caretakers is occurring.

- The critical issue of availability of spare parts has not yet being fully addressed. In the long-term, hand pumps should only be imported through local traders and not ordered directly from the international suppliers. This would provide the incentives and build the capacity in country for the private sector to be responsible for assuring spare parts availability. In the short-term, assistance will have to be given to the communities to assure functioning of the pumps.

- No hygiene education accompanied supply of water systems.

Sanitation

In general, sanitation activities have been limited to construction of public latrines at health facilities and schools. This is probably as far as one should go with the construction of community latrines. One has to assure that the school directors and the clinic OIC are aware of and are willing to assure proper use and maintenance of the latrines. These have been VIP (ventilated improved pit) latrines, which included concrete block lined pits, reinforced slabs, concrete block superstructure, corrugated zinc roofing and PVC ventilation pipes. The construction of the latrines visited seemed solid, and the principles for correct VIP functioning were, in general, being applied (darkened facility, screened pipe, “keyhole” with no lid, etc.). However, the cost of these latrines of about US$150, is prohibitive for replication at family level. Most of the facilities visited were

locked for the personal use of clinic staff.

There is a movement to introduce the domed unreinforced "Sanplat" or Mozambican slabs for family latrines. These would be used on unlined pits, with superstructure made of local materials. The pit would be unventilated and a lid is provided for the "keyhole." Cost of these latrines is estimated at US$15. If the Mozambican example were followed, there would be significant subsidy to encourage widespread use of these family latrines with production of the slabs carried out by the small-scale private sector.

There seems to be little community sanitary education, even though environmental health technicians report they are "telling" communities of the benefits of latrines with little success in family latrine production. The environmental health technicians probably need training to improve their skills in participatory community development activities where the desire for the latrine does not come from the telling of the technician but is demand-driven the family wanting to improve its health and quality of life.

UNICEF, the EU, and various NGOs are continuing construction programs in water and sanitation and are also beginning to address sustainability issues.

Environmental Health

MOH environmental health technicians are attempting to enter communities with preventive environmental health messages, but would appear to lack skills in appropriate community participation approaches.

Priority Interventions

Given that very little is being done to link the hardware components of water and sanitation programs to the necessary behavior changes for there to be a significant improvement in health indicators, the health sector can play a fundamental role in supporting this aspect. Of all possible participants in water and sanitation activities, the health sector has the most personnel in the field in long-term positions who can help assure sustainability of the systems as well as assist the communities in obtaining the best health benefits from these systems. Some of the interventions that can be highlighted are:

- *Coordination between water/sanitation and health activities.*
  At the county and clinic levels, MOH personnel should coordinate with all water and sanitation installation and maintenance programs in their area of intervention. The clinics, with their associated health committees, can act as links and focus points for water and sanitation programs.

- *Improved water source for clinics.*
  It is important that each clinic has an improved water source attached to it as well as improved sanitation facilities.

- *Modeling of behavior change.*
  To reinforce environmental health and proper hygienic behavior, it is important that clinics become models for correct environmental health practices and hygienic behavior. This would include, amongst others:
  - correct maintenance of hand pumps with proper drainage of excess water;
  - correct use and maintenance of latrines including provision of hand washing facilities near the latrine;
  - regular hand washing by all health personnel (this would mean having easily accessible hand washing facilities);
  - safe water storage and handling practices, particularly potable water;
  - correct disposal of garbage (especially medical waste); and
  - drainage of stagnant water.

- *Demonstration latrines.*
  In order for communities to understand the different levels of technology available for sanitation, it might be useful for clinics to be able to demonstrate various models, from the "no-cost" mud and stick latrine, through the Sanplat, the VIP, or even the pour-flush, so that individual families can see what they can afford at any particular time. the environmental health technicians should receive TOT training in the construction of these various technologies, as well as the advantages and disadvantages of each technology, to be able to better support the rural communities.

- *Safe water.*
  Health personnel in the clinics should be involved, through the community health committees, in regular chlorination of wells in addition to training communities in correct storage and handling of potable water, which could include chlorination at the household level.

- *Community health.*
  Clinic personnel should join with the community health committee in carrying out participatory health assessments and the associated health education.

- *School-based environmental health.*
  The Ministry of Health should encourage the Ministry of Education to include environmental health education in its primary school curriculum. Clinic personnel could already co-ordinate with school directors in the communities to assist in providing environmental health courses to the pupils. These could include appropriate environmental health activities to be carried out by the pupils.

APPENDIX V

DECENTRALIZATION AND HEALTH CARE REFORM

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Environment

A National Planning Conference was held in November 1997 to act upon a WHO assessment and diagnostic overview of the status of health services in Liberia. Participants at this conference included the Ministry of Health and Social Welfare (MOH&SW), the acting minister of planning and economic affairs, major bilateral donors (USAID, GTZ, EU), United Nations Agencies (UNDP, UNFPA, UNICEF, WHO), international and national NGOs, representatives from health professions and women's organizations, and staff from the GOL ministries that have a sectoral interest in health. As result of the five-day conference, a two-year national Action Plan for Revitalizing the Health Sector was developed.

Five critical issues were identified in the context of immediate challenges to reforming the health sector: 1) reversing sector bias; 2) enhancing financial support, in conjunction with the Government of Liberia, fee for service and revolving drug fund mechanisms, and national health insurance plans); 3) retraining and redeployment of health workers; 4) strengthening supervision at lower levels; and 5) ensuring the availability of drugs and essential supplies.

The action plan proposes tandem action on two fronts: the revitalization of the health delivery system, and sectoral reforms and strategies to institute effective policies. There is recognition that training and capacity building will be necessary from the clinic level right up to the ministry level to achieve success. The action plan has also identified nine priority health programs:

- restoration of hospital, health centers, clinics and health posts to full functionality;
- developing and strengthening of reproductive health services including training of trained birth attendants;
- developing and strengthening of child health services;
- revitalizing nutrition services;
- revitalizing disease control programs;
- developing appropriate management support systems;
- revitalizing the health information system;
- developing and revitalizing social welfare services for orphaned and street children and the disabled; and
- water and sanitation.

The existence of this well-organized action plan is particularly encouraging as it reflects participation by all partners in the health sector. The test, of course, is how it will be used as a tool

and whether it will remain dynamic and organic.

Decentralization

Strengthening health systems by decentralization is an important element in government reform but it requires careful execution and monitoring. The desired effects of decentralization include improving the delivery of primary health care, empowering local communities, and improving efficiency, management, and responsiveness of government health services.

Currently, decentralization of the health sector in Liberia has not been fully achieved. However, a firm foundation is being laid. County health teams for all 13 counties have been constituted, named, and assigned. The county health team is comprised of a county health officer (a medical doctor), a health services administrator, a public health officer in the community health department, a finance officer, a logistics officer and a personnel officer. There are also associate members, including community leaders and NGO representatives. A national orientation workshop was held by the MOH&SW in March 1998 to discuss the roles and functions of the county health team, to improve coordination at the county level and to provide support for preparing technical action plans for each county.

Unlike many other areas, where policies and guidelines have either not been formulated or no longer exist because of destruction during the war, decentralization guidelines remain. They were actually developed in 1986 under the auspices of a USAID activity, the Southeast Region Primary Health Care Project. The MOH&SW has formally committed to decentralization as part of its December 1997 Action Plan: "Key to these strategies will be the reorganization of the central level of the Ministry of Health and Social Welfare so that its mandate is limited to policy formulation, program management, monitoring and evaluation. Matters of planning, implementation, and management of resources are to be decentralized to strengthen county health offices."

While there does appear to be a supportive conceptual environment for decentralization, it will be important to build capacity both at the central and county level so that the entire health team, from the minister to members of the county health teams, have a clear understanding of the responsibilities and benefits that decentralization brings. In addition, the guidelines will need to be updated and rewritten to reflect the current environment.

Health Care Reform

Drugs are currently dispensed free of charge to all patients at MOH&SW facilities. However, all patients pay a fee for each clinic visit of a minimum of L$5 for a child and $10 for an adult. In addition, pregnant patients are charged a one-time fee of $50. Some non-public facilities charge higher fees. At most government health facilities, 70 percent of the fees collected is paid to staff as an incentive to supplement low government salaries. The remaining 30 percent is shared between the facility and the county health team. In facilities that are supported through OFDA or other donor grants and managed by INGOs, any shortfall in staff incentives is subsidized by the donors. Currently, the GOL, in consultation with major donors, is preparing a plan whereby it would gradually assume the payment of these incentives. in addition, at the recent orientation workshop for county health teams, one of the recommendations was to investigate how to best utilize fee-for-

service income to meet the needs of the counties.

Health care personnel and members of the community acknowledge that fee-for-service is necessary and the amount of the fees should be increased in order to help achieve better health care. There was, however, no consensus of how much should be charged, whether there should be exemptions for the poorest of the poor, or when fees for drugs should be instituted. Most people agreed that at least two growing seasons would be needed before service fees should be increased as most of the population have little current income to pay for health services. However, there is anecdotal evidence that some people are paying higher fees for health care at private facilities and even paying for their drugs at private pharmacies. It is hard to determine if this information is accurate and, if so, how many people are able to meet the higher cost.

Although governments often acknowledge the critical need for increased funding of health care, it is difficult for them to commit to funding unless they can be persuaded that it is a good investment rather than an unending outlay of scarce resources. The FY 1998 total health budget for Liberia is US$2.3 million out of a total national budget of $44 million. Thus, the health sector receives approximately 5 percent of the national budget. Although at first blush, this does not appear to be substantial, when viewed in terms of other West African countries it is quite respectable, especially when one considers that the only line items that are greater in the national budget are defense and education.

A revolving drug fund was operated before the war, but the MOH&SW does not operate one currently. However, it believes that the Bamako Initiative should be implemented at some point when the returning population would be able to pay some part of the drug costs. The draft National Drug Policy proposes to establish a revolving drug fund under the supervision of the National Drug Service and the Christian Health Association of Liberia with community involvement and support from the MOH&SW. NDS and CHAL are discussed in more detail in the pharmaceutical section.