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REVIEW OF THE HEALTH SECTOR
OF THE
ETHIOPIAN FOURTH FIVE YEAR PLAN

An Analysis for the
USAID Mission to Ethiopia

by

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SUMMARY AND RECOMMENDATIONS

The health sector of the Ethiopian Fourth Five Year Plan envisions expansion of basic health services principally through doubling the number of health stations from the present 500 to 1,000, and upgrading their manpower by staffing each with two health assistants (two years health training) in place of the present dressers. In both training and health station activity there would be increased emphasis on preventive health, maternal and child health, and family planning, as opposed to purely curative services. There would be a moratorium on hospital construction and expenditures for hospital and clinical services would be rationalized.

The Team retained by USAID/Ethiopia to review the health sector of the FFYP are of the opinion that these goals are basically sound and in accordance with AID objectives for improved integrated health/nutrition/family planning delivery, and that the case for expansion of basic health services is very strong. The financial resources of the IEG appear adequate to support the proposed expansion, and substantial external resources are available.

The absorptive capacity of the Ministry of Public Health for the incremental resource input, and its ability to meet the proposed training and deployment schedule, appear somewhat constrained by several factors including organization and administrative deficiencies; inadequate logistic, transport and communications support; insufficient supervision; and supply deficiencies. Many of these constraints can be ameliorated by specific

low-cost contributions of technical assistance and research support. If provided according to the conditions precedent cited herein, such contributions could effect considerable payoff in FFYP health sector success for relatively minor investment. Accomplishment of the health sector expansion could, in turn, have considerable impact on the success of FFYP development goals; particularly, if economic development and health sector expansion progress in concert.

Accordingly, the Team recommend that USAID/Ethiopia be receptive and prepared to respond to IEG requests for:

- 1) Technical assistance in management and administration, logistics and supply, and supervision at positions of influence within the Ministry of Public Health and within the basic health services network.
- 2) Support for the health portion of interministerial package programs in rural development, which combine selected inputs of access roads, agriculture, education, water supply, health and sanitation, etc.
- 3) Technical assistance in coordinating into a unified health effort, the activities of Governmental units, private voluntary organizations, missionary groups, and international organizations involved in the support and delivery of health care.
- 4) Research on indigenous practitioners in Ethiopia: numbers and locations, types of services performed, relationships with rural populations, constraints to their use in delivering health services, and means for utilizing their abilities in accomplishing the objectives of expanding health/nutrition/family planning delivery to rural populations.

5) Analysis of Ethiopian health sector strategy, with a subsidiary objective of determining sensitive and crucial points for future AID involvement and the extent to which such involvement would benefit or burden economic development effort. A "hard" analysis is recommended, including comparison of strategic alternatives, cost-effectiveness analysis, replicability tests, and output indicators for improvement in both productivity and health status.

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INTRODUCTION

During the autumn of 1973, in preparation for its Development Assistance Program Submission (DAPS), USAID/Ethiopia undertook an analysis of the Fourth Five-Year Plan (FFYP) proposed for the Imperial Ethiopian Government (IEG) for the period 1975-79. In this connection, and in response to a request by AID/W for particular commentary on the FFYP health sector proposals, the Mission requested an "in-house" sector review of these proposals by a team experienced in LDC health planning.

The team selected for this task comprised:

1. Edward B. Cross, M.D., Provost of the University of Missouri Medical School (Kansas City), former Assistant Surgeon-General, U.S. Public Health Service, and former Medical Director, U.S. Peace Corps in Ethiopia.
2. Norman Holly, Human Resources Economist, Bureau for Program and Policy Coordination, AID/W.

The sector review was directed primarily to IEG plans and programs for the basic health services. It also included, however, consideration of health related activities in which USAID/Ethiopia is presently involved with regard to Maternal and Child Health/Family Planning (MCH/FP); plans for and timing of integration of basic health services with categorical programs such as malaria eradication; possibilities for a DEIDS-like project (Delivery and Evaluation of Integrated Delivery Services for health/nutrition/family planning); relationships with AID non-health development projects (decentralized local administration, rural roads, etc.) currently underway; and activities contemplated in this area by other assistance donors.

As a background note, the Ethiopian Ministry of Public Health (MOPH) have recently assessed progress in the health field against objectives set forth in the Third Five-Year Plan (TFYP). They have also commissioned seven internal task forces to draft a Health Sector Review, which is the current basis for the health component of the Fourth Five-Year Plan. The evolution of IEG plans in the health field were believed to have reached a point of permitting some preliminary conclusions about relationships between the Health Sector Review and probable IEG activities in health during the FFYP period.

It is noted that AID has contributed more than US\$ 11 million in grant support of health and health-related activities in Ethiopia during the past twenty years, for projects such as:

- Gondar Public Health College
- Eritrea nurse training program
- Public health advisory services
- Public health general support
- Public health education
- Community water supply
- Nutrition survey
- Public health demonstration and evaluation projects
- Health centers at Makele and Dessie
- Malaria eradication, control and surveillance
- Ethiopian well drilling program
- Public health cooperative program

Although USAID/Ethiopia were quite emphatic with the MPH that their sector review would not imply nor necessarily presage AID commitment to additional

health program funding, the Mission did feel a necessity for assessing the IEG priority for health in its FFYP, for learning of various sources for assistance, and for determining the FFYP constitutes a basis for further exploration of AID interest in Ethiopia as a site for promotion of low cost health delivery programs.

The Team's terms of reference were to:

- a. Determine the main programmatic health priorities likely to be pursued by the MOPH during the IEG Fourth Five-Year Plan.
- b. Identify the goals and objectives of these programs and the possible constraints to achieving them.
- c. Comment on the extent to which achievement of these program goals will contribute a more equitable access to health services (preventive and curative) and the extent to which achievement will result in improvement in the "quality of life."
- d. Assess the plans for integrating the basic health services with the specialized services, such as Malaria Eradication Service.
- e. Assess the receptivity of integrating family planning services and information into the regular Maternal and Child Health services of the Ministry of Public Health.
- f. Describe the traditional, non-modern system of health education and service which operates in rural Ethiopia, including regional/tribal variations if known, and discuss the feasibility of expanding this system in an effort to improve delivery of health services.

Interviewees included officials of several Government agencies, representatives of private and voluntary organizations and academicians expert in the subjects of inquiry. They are identified in an appendix to this report. A provincial health department, a health center, a health station and a provincial hospital were also visited, all in Sidamo Province.

Of the report that follows, the first section (health care delivery and health education) was drafted by Dr. Cross and the second section (economic and fiscal considerations) was drafted by Mr. Holly. The Team members collaborated in the final version of both sections.

HEALTH CARE DELIVERY AND HEALTH EDUCATION

I. Geographic Setting

Ethiopia covers one million square kilometers and includes a population numbering more than 26 million persons -- approximately 19.5 persons per square kilometer. It varies greatly in topography, from rich fertile high plateaux and plains to semi-desert lowlands to hot desert lands. Steep slopes and escarpment are scattered over much of the country. The rugged topography exacerbates transport and communication problems, and also is deleterious to climate and the health of its inhabitants. Distinct languages and cultures are to be found throughout the country. It is estimated that 93 percent of the population reside in rural areas, largely in small groups of families, and survive largely in a subsistence agrarian economy. The majority of these groups are located further than ten kilometers from the nearest track, which further complicates transport, communication and water supply; especially during

rainy seasons, when many of these settlements become completely isolated from the mainstream of activity.

Although no census has yet been taken, it is thought that the largest religious denomination is National Coptic Christian (estimated at 40 percent of the population). The laws of this church combine Mosaic laws and Christian doctrine, as well as some Moslem customs. Many of these laws reflect on health and health practices; e.g., more than 100 fasting days annually, both male and female circumcision, eating only meats killed or prepared by another Coptic Christian. Other beliefs, often mixed with orthodox religious beliefs, often attribute diseases and disabilities to nonmedical causes.

II. Health Problems

Severe health problems accumulate in such as setting. The IEG has taken significant steps toward their resolution since the establishment of its Ministry of Public Health in 1948; but, as one might well imagine, a great deal remains to be accomplished in reducing morbidity indices toward those of industrialized nations. Resources available to the health sector are scant. Ethiopia has a per capita income of only E\$ 117 (US\$ 56). It devotes 5.8 percent of its national recurrent expenditures to health -- roughly, 1.3 percent of its GDP -- which is a per capita expenditure of E\$ 0.95 (US\$ 0.43). This level of resource investment in health compares unfavorably with most developing countries. It is estimated that only about 15 percent of Ethiopia's citizens enjoy access to scientific health care.

Ethiopia's health problems comprise primarily communicable and parasitic diseases, diseases due to or related to environmental sanitation, malnutrition, etc. It is estimated that approximately 70 percent of all illness in Ethiopia is preventable by simple modern public health practice. This augers well for and should justify strong emphasis on public health and preventive service programs as part of basic health services; justifiable not only in cost-benefit terms but also for enabling coverage of a larger proportion of the population for a given resource investment than would be possible in the supply of curative services.

Ethiopia's health problems are well described in the report of the special steering committee for the Health Sector Review, dated April 17th, 1973,^{1/} "Like all other poor countries, Ethiopia suffers from a great burden of disease. It cannot afford to spend large sums of money on health and will not be able to do so in the immediately foreseeable future. But it does not have to remain saddled with this burden indefinitely. This is because most of these diseases are preventible.

"Communicable diseases and nutritional deficiencies are responsible for the vast bulk of the country's ill-health. They occur with greatest incidence and severity in young children, who suffer extremely high morbidity and mortality rates. They are also wide-spread amongst the adult population. They cause chronic ill-health and decreased work capacity. They severely affect the health of women of childbearing age, increase the hazards of pregnancy, child-birth and suckling, and often impair the health and prospects for survival of the babies.

^{1/}IEG/MOM: Health Sector Review, Fourth Five-Year Plan. Addis Ababa, April 17, 1973 (stencil).

"Intestinal infections and parasites, malaria, eye and skin infections, venereal diseases, measles, pertussis, tuberculosis, leprosy and smallpox, together with nutritional deficiencies, constitute the major diseases of this country.

"Prevention (together with basic curative services) can improve the health of the mass of the people within a possible health budget. It is relatively cheap and it can be made effective. It alone can break the vicious circle of disease-treatment-recurrent disease.

"Early diagnosis and treatment of some diseases can prevent the outbreak of epidemics and halt their possible spread. Simple, inexpensive methods for rendering water safe to drink can prevent many diseases. With practical health education and sufficient encouragement, people can do more for their own health preservation than health services can do for them. This is particularly true in bringing up healthy children.

"A predominantly curative approach to the diseases of the country continues to allow people to fall ill. It does not reduce the occurrence of diseases in the country; neither does it improve the people's health. It merely provides treatment, which may or may not prove effective.

"Curative medicine, by its very nature, readily becomes costly. It often requires highly skilled personnel, sophisticated diagnostic facilities, drug treatment and hospitalization - all very expensive items. Essential curative services must be made available for everyone in the country, and indeed often form part of the work of prevention. But purely curative

medicine must not be allowed to detract from the vital work of prevention, and it must not become so elaborate that it can only be afforded by a small minority of the population.

"In Ethiopia, the main preventive actions needed are:

- 1) environmental sanitation, especially the provision of safe drinking water
- 2) immunization
- 3) health education, especially in relation to hygienic practices, environmental sanitation and childhood nutrition
- 4) early treatment and case-finding of certain diseases (notably VD, leprosy and TB)
- 5) certain special actions like insecticide-spraying for malaria.

"These preventive actions, together with basic curative services, constitute the immediate health needs of the country. At present about 15% of the population obtain any organized health care - mainly in the form of curative service."

III. Health Care Resources

It is estimated that approximately 40% of the health services in the country are provided by non-IEG resources (outside the cities about 70%).

A. Ministry of Public Health:

1. Health Facilities:

Hospitals	42 (5,500 beds)
Health Centers	93
Health Stations	500 +

Of the total number of hospitals operated by the MOPH, 47% of the beds (excluding the Duke of Harrar Hospital) are located in Asmara and Addis Ababa. It has been estimated that for these two cities the ratio of hospital beds to population is 1:500, whereas in the remainder of the country the ratio is 1:5,000. The hospitals in Addis Ababa and Asmara utilize approximately 30% of the recurrent annual expenditures for health, whereas the remainder of the hospitals together utilize less than 20% of such expenditures. (These figures exclude the Duke of Harrar Hospital.) Although the provincial and district hospitals, which complete the rural hospital system, need improvement and consolidation, this will become a second priority to the expansion of health stations and health centers in the FFYP.

The key elements in the rural basic health services delivery system are the health centers (114 by 1974, at least one for every awraja) and health stations (500 + by 1974).

2. Health Manpower:

(a) Physicians:

There are 375 physicians in the country at the present time, of which 178 are Ethiopian. The majority of the physicians are employed by the MOPH. With the projected graduation of 135 physicians by HSIU Medical School during the FFYP and the return of 80 physicians from abroad, the number of Ethiopian physicians alone will rise to 350.

Physicians trained at IEG expense must serve an obligatory period of two years in the MOPH. The new graduates of HSIU Medical School must serve in the rural health services for this period of time. Consequently,

twelve of the fourteen Provincial Medical Officers of Health posts are filled by Ethiopian Physicians. The remaining two provincial health departments have Ethiopian physicians serving as Deputy PMOHS.

(b) Health Officers:

Health Officers (Gondar Public Health graduates) are the backbone of the rural health care delivery system in Ethiopia. Since its establishment, Gondar P.H. College has graduated 348 Health Officers. At present there are 238 employed by the MOPH, serving in health centers, provincial health departments, in hospitals and special programs. It should be noted that 27 of the previously trained Health Officers have become physicians.

(c) Community Nurses:

Gondar trained community nurses are the second key health manpower category of the rural health services delivery system. At present there are 175 Community Nurses serving in the MOPH. This number will be expanded to 268 community nurses during the FFYP, to work in PHD, health centers and special programs.

(d) Sanitarians:

Sanitarians are the third strategically important health manpower element in the rural health services delivery system. Presently there are 172 sanitarians employed by the MOPH, serving primarily in PHD's, provincial hospitals and health centers.

(e) Graduate or Registered Nurses:

There are presently more than 800 registered nurses in the country, the majority being employed by the MOPH. There is an

estimated shortage of more than 600 RN's in the country at present. The majority of RN's are employed in hospitals, mostly employed in Addis Ababa and Asmara.

(f) Dressers:

There are over 1,000 advanced dressers, approximately 1,200 elementary dressers, making a total of approximately 3,000 of all types. Most of these dressers are employed by MOPH, staffing health stations (more than 1,000) and provincial and district hospitals.

B. Voluntary Agencies and/or Non-IEG

Voluntary agencies and/or non-IEG health agencies provide a significant proportion of the services and resources for health care delivery in Ethiopia, especially in rural areas. Altogether there are 25 different mission operations comprising about 150 medical units. Some of the more important operations are:

1. Haile Sellassie I Foundation:

This is a private non-profit foundation, conceived and founded by His Imperial Majesty Haile Sellassie I in 1955. The HSIF hold assets totaling over ES 38 million (up from E\$ 3 million originally), largely in land and property. In addition to its social welfare contributions, the HSIF operates eight hospitals and clinics, and a mobile eye clinic, as follows:

Haile Sellassie I Hospitals (240 beds); The Tesemi Aba Yirga and Kecebush Desta Eye Clinic (43 beds); Birla Pediatric Clinic; St. Paul's Hospital (400 beds) Ganda Memorial Hospital (73 beds), Leul Ras Makonnen Hospital, Harrar (160 beds); St. Mary's Hospital, Axum (110 beds); Mobile Eye Clinic; Maternal and Child Health Services

programs; and Family Guidance Services (in conjunction with the Ethiopian Family Guidance Association which is under the HSIF).

2. Ethiopian Women's Welfare Association:

The EWWA was founded and chartered in 1941 as a private non-profit organization by His Imperial Majesty Haile Sellassie I. It has made a significant contribution in the financing and support of health education and social welfare programs in its more than 30 years operation. The following are some of its activities in health and health related fields:

(a) Adult Education and Social Action:

Princess Tenegne Work School and District Centers at Kolfe, Entoto, Mekakelegna and Yeka, providing education for women in home and child care, literacy, crafts, sewing and family life.

(b) Maternal and Child Health Clinics:

Five Mobile MCH Clinics in Addis Ababa (3) and in two rural villages 30 and 55 km., from Addis Ababa. There is a doctor, a nurse and supporting staff working at all times in each Mobile Clinic. These clinics served over 97,000 women and children during the past year.

3. Sudan Interior Mission:

The SIM is very active in health, particularly in leprosy treatment and rehabilitation, and trachoma and eye disease services.

Following is a list of the hospitals and clinics SIM operates:

Leimo General Hospital (Shoa) (25 beds); PTWHS Hospital (50 beds) and Leprosy Clinic, Shashamane; Shashamane General Hospital (50 beds); Prince Makonnen Hospital, Dilla, (50 beds); Soddo General Hospital (101 beds);

Sellassie Hospital and public health services, Dessie (29 beds); and Kallaffo Clinic, Harrar. The SIM employs 39 RN's, 6 physicians and 80 dressers. It reported 5,200 hospital admissions and 317,840 out-patient visits last year. The SIM operates a leprosy control program in Dessie (5,000 patients, 47 market clinics visited weekly or fortnightly, 8 airstrips) and in Sheshamane (8,500 patients, 45 market clinics visited weekly or fortnightly); as well as a dressers training school in Soddo.

4. Seventh-Day Adventist Mission:

This Mission is very active in the health field and has a good reputation for providing quality health services in the country.

The mission operates four hospitals and clinics as follows:

<u>Hospitals</u>	<u>Hospital beds</u>	<u>Clinics</u>
Addis Ababa	110	2
Dessie	50	1
Debre Tabor	45	2
Gimbe	45	2

In addition the Mission is beginning a flying physicians service, where physicians will be flown to clinics and hospitals for consultations and medical supervision of clinics.

The medical staff of the Seventh-Day Adventist mission includes 10 physicians, 29 Ethiopian RN's (2 involved in nurse training) and 10 foreign RN's (5 involved in nurse training), and 45 dressers.

In addition the Mission operates a nurse training program and a dresser training program.

It is of interest that the Seventh-Day Adventist Hospital in Addis Ababa (Empress Zauditou Hospital) has built in audio systems at each bed, which is being used for health education programs for patients.

5. Church World Services:

Carries out leprosy program and supplies family planning kits through hospitals and clinics.

6. Mennonite Central Committee:

Operates hospitals and clinics at Deder, Bedenò and Nazareth.

7. Medical Assistant Program:

Provides assistance to several mission hospitals and clinics.

8. Family Guidance Association of Ethiopia:

This is a private voluntary agency which is providing support and assistance in educational programs and clinics for family planning services, in association with other voluntary and governmental groups and clinics. It is funded by IPFT/London at about US \$100,000/year.

9. Medical Mission Sisters:

Provides financial and personnel support for hospitals, MCH clinics, out-patient clinics mobile health units, and dispensaries, and also operates training programs for nurses, nurse aides, midwife and medical technicians.

Representatives of several voluntary agencies indicated a desire to plan and work more closely with the Ministry of Public Health. Only within the last 2-3 years has there been any opportunity for significant dialogue between the groups in this regard. Approximately three years ago an annual workshop was initiated for voluntary health agencies' representatives and the Ministry of Public Health. Some agency representatives expressed a hope that this would lead to more significant dialogue and better coordinations with the MOPH.

C. Other Health Resources:

1. UNICEF: From 1954 to present, UNICEF has contributed more than U.S. \$3 million for health services programs, more than US \$86,000 for child feeding programs, and US \$132,000 for training nutrition workers and home economists.

UNICEF has had a long term commitment and maintains continuing interest in support of health service programs in Ethiopia, especially training programs, provision of transport and communication, and nutrition.

2. Swedish International Development Agency (SIDA):

The Swedish Development Agency has been a major contributor in health in Ethiopia, having contributed several millions of dollars over the past twenty odd years. This support has been in the following areas:

- Ethio-Swedish Pediatric Clinic, Addis Ababa, (including provision of professional medical staff).

- Ethio-Swedish Health Center Project

Assisted in the development of basic health services in Wollega, Illubabor and Arussi Provinces, including supplying professional

public health staff, clinic and hospital buildings, vehicles, water supply, and sanitation programs. Also, SIDA has recently announced the construction of two new health centers and twelve new clinics in Arussi Province.

- Experts and volunteers in the health sector

Provides two physician public health advisors and two physicians to the medical faculty of the Medical College. Also provides several volunteer health workers to various health programs in the country.

- Ethiopian Nutrition Institute

SIDA was responsible for the establishment and operation of this institute, which was first known as the Ethio-Swedish Nutrition Institute. In the past several years its activities have focused primarily on nutrition research, however more recently it has become involved with high protein concentrated food production such as Faffa. There is current discussion on possibly separating ENI from the MOPH, and having it serve as the focus for nutrition research, national nutrition policy and strategy, and commercial production of new foodstuff.

3. U.S. Agency for International Development:

U.S. AID has been one of the major contributors to health programs in Ethiopia over the past, having contributed more than \$11 million (U.S.) in grant support of health and health related activities during the past 20 years. (See above).

4. Federal Republic of Germany:

The German Government has contributed several million dollars for support of health activities in Ethiopia over the past fifteen years.

This assistance has been in the support of such projects and activities as follows:

Provision of professional medical staff personnel at HSI Hospital in Addis Ababa; construction of hospital and living quarters, and provision of professional health personnel at Feleghe Hiwot Hospital, Bahar Dar; provision of basic health services in Gojjam Province, (including professional staff, mobile health teams, drugs and training of auxillary health workers); construction of the Leprosy Relief Center, Bisidimo; and assistance in the construction of the nurse training school at St. Paul's Hospital.

5. U.S.S.R.:

Russia has made a significant contribution to health activities in Ethiopia, particularly in Addis Ababa. Thirty eight Soviet physicians and interpreters staff the Dejazmach Balcha Hospital in Addis, and other staff have been provided in past.

D. Traditional Health Workers:

It has been estimated that traditional health workers (e.g. midwives, wogeshas (surgeon-herbalists), drug vendors, and zars (spirit healers) provide a large proportion of health care, particularly in areas where organized basic health services are not provided. Leading this entire group in this respect are the traditional midwives (birth attendants) who are estimated to deliver the vast majority of babies in the country. (It is estimated that not more than 3-5% of rural deliveries occur in health institutions). This poses great health problems in cases where

the untrained midwife is in attendance for complicated deliveries and because of unsanitary practices leading to postpartum and neonatal infections. Complicated deliveries often lead to damaged or dead babies, and traumatic gynecological injuries or death of the mothers. There are no accurate statistics as to the number of such practitioners in the country.

Currently, HSIU and EWWA operate a pilot training program for traditional birth attendants. The wogesha (surgeon-herbalist) is reputed to be popular among many, particularly in the rural areas. He is reputed to perform such surgery as cutting of the soft-palate (uvula) for sore throats and extracting canine teeth in children for diarrhea, etc., both of which are considered poor medical practices. It is difficult to substantiate the extent of such activities, inasmuch as the wogeshas are able to perform secretly.

The debteras (religious spirit healers) and the zars (spirit healers) operate primarily on a psychic or supernatural basis in the case of the former, and on an evil spirit (demons) basis in the later. Very little documented description has been recorded of the impact, nature of activities, and numbers of such practitioners in the country. On the surface it would seem that they may represent a large potential source of health care, if their talents could be harnessed and directed in a medically acceptable direction.

IV. Fourth Five Year Health Plan for Ethiopia

A. Background:

Over the past 10-15 years Ethiopia has attempted to overcome deficiencies in health care delivery through the establishment of a rural basic health services delivery system. The key elements in this system, in terms of facilities are the provincial health departments, provincial hospitals, health centers and health stations. In terms of manpower, key personnel are the Provincial Medical Officer (physician); a Gondar Public Health College trained team (health officers, community nurses and sanitarians); laboratory technologists; and dressers (manning health stations). The health stations are considered as outposts or "entry points" into the basic health care system, whereas the health centers were intended to serve as secondary referral centers, in addition to providing primary health care services. The provincial hospitals were designed to serve for in-patient care and as tertiary referral centers. The Provincial Medical Officer of Health (PMOH) was the medical officer (physician) who was to preside over and supervise this rural health care delivery system at the Provincial level. This system was also designed to provide both curative and preventive health services.

Over the past several years it has been realized that this health care delivery system was neither functioning as intended nor efficient in terms of numbers of people served; that it provided mostly curative services rather than preventive services; and that it lacked coordination. These deficiencies have been attributed to:

- Management and administrative problems at all levels.
- Lack of appropriate supervision at all levels of the system.

- Lack of clear definition of roles and responsibilities at all levels.
- Lack of adequate operational budget and/or supplies and equipment for such things as transport, gasoline, drugs, surgical supplies, etc.

B. Objectives of the FFYP:

In an attempt to resolve many of the problems of the existing system, while at the same time attempting to reach a greater portion of the population, the MOPH has set the following objectives in its proposed FFYP for Health:

1. Expansion of the system by increasing number of health stations by 500 (1000 total) and health center by 20 (13 $\frac{1}{4}$).
2. Staffing the health stations with a new cadre of health worker (health assistant) and training 1,000 of these during the FFYP period. This new cadre would be trained with a primary emphasis on preventive as opposed to curative services.
3. Improving existing health stations by retraining dressers in areas of public health and preventive health services, plus improving supervision of the health stations.
4. Improving the entire system by:
 - Decentralization of authority down to the provincial and awraja levels.
 - Providing adequate budget for operations, supplies, equipment, drugs, gasoline, and capital expenditures, including spending authority to the FMOH.

- Clearly defining roles and responsibilities for all personnel and at all levels.
 - Providing adequate staff at all levels of the rural health delivery system, including for supervisory responsibilities.
 - Integration of Special Services Programs with Basic Health Services as early as possible.
5. Improving Maternal and Child Health by:
- Preventing malnutrition of children by health education, regular surveillance of children's weight status, and cooperation with agricultural schemes.
 - Prevention of childhood infections by immunizations and health education, in cooperation with environmental sanitation and CDC activities.
 - Provision of better ante-natal care, i.e., screening pregnant women at risk and provision of institutional delivery for complicated cases.
 - Improving the practices of traditional birth attendants through training and cooperative working arrangements.
 - Provision of basic health services for mothers and children throughout the health care delivery system.
6. Improving School Health Services by:
- Setting up a coordinating committee with the Ministry of Education for the implementing of joint programs.

- Providing health education training of school teachers.
 - Working with the Ministry of Education to make health education a part of the curriculum.
 - Encouraging teachers, school personnel and students to develop self-help projects in health, nutrition and environmental sanitation.
 - Working with the Ministry of Education to insure maintaining adequate levels of immunization of students.
7. Improving the Nutritional Level of Population:
- Continuing to expand on the efforts and activities of the Ethiopian Nutrition Institute in the area of research, surveys, education, food production, etc.
 - Developing new and distinct role for ENI to enable it to function more effectively in development of national nutritional strategy and national nutritional policy.
 - Requiring all health units of the MPH, especially MCH Clinics, be maximally engaged in nutrition education and MPH participate in rural development schemes in regards to food production and distribution.
8. Improving Environmental Health Conditions by:
- Working with other agencies, such as Municipalities Water Resources Commission, Ministry of Public Works, etc., to provide a safe water supply, proper waste disposal, and safe food for ingestion.

- Setting up demonstration projects for providing safe water supply in rural area.
 - Providing technical assistance for development of water supplies, sewage disposal, etc.
 - Providing education and training to general public, food handlers, community development workers, teachers, etc.
9. Communicable Disease Control by:
- Improving environmental sanitation
 - Immunizations
 - Health education, particularly in regards to personal hygiene and environmental sanitation.
 - Early case finding and treatment of diseases such as V.D., T.B., leprosy, malaria and trachoma.
 - Certain special activities as spraying for malaria prophylaxis.
 - Assigning a CDC officer to each PHD.
10. Anti-Malarial (Control) Program:
- Improving upon the gains made in Area "A" by continuing present activity.
 - Extending services to new development areas as necessary.
 - Training MES employees in malaria public health education and detection and reporting of major communicable diseases.
 - Providing some health services in areas where organized health services do not exist.

- Carrying out applied research in malaria control as practicable.
- Conducting necessary studies to define the malaria problem, control epidemics and determine cyclic trends of malaria.
- Working with other units in the MPH to study feasibility and strategy for integrating Malaria Eradication Service. With the Basic Health Service, whenever and wherever possible.

11. Improving Health Education by:

- Convening a committee of all pertinent agencies within and outside the MOPH for overall health education planning and implementation.
- Appointing an Ethiopian-trained health educator to each Public Health Department.
- Assigning full responsibility to the MOPH Division of Health Education for development and administration of all health education programs.

12. Improving Health and Vital Statistics by:

- Setting up a reporting system for all major diseases.
- Setting up a reporting system and data collection system at the provincial level.
- Assignment of a statistical clerk at the PHD.
- Strengthening the staff and resource capability of the Division of Health Statistics to enable it to function more effectively.

Throughout all of the stated objectives of the FFYP, the central theme is improvement and expansion of Basic Health Services. It is proposed to do this through integration of health service programs, coordination of health programs, and rationalization of services, such as urban hospital programs.

C. Aspects of Health Care Delivery under the FFYP

1. Overview

At this writing the FFYP is being reviewed and amended by the Planning Commission Office preparatory to presentation for IEG approval.

The Team wish to state from the outset that the IEG/MOPH deserve great praise for their foresight and concern in formulating the FFYP health sector. The authors and their superiors have submitted a proposal that recasts priorities for health services toward citizens suffering low income and living in rural areas, where health needs are the greatest. Their determination to improve equity in the distribution of health care comes through clearly.

The Team's initial reservations to the plan concerned the ability of the IEG to marshal sufficient resources for the plan's implementation. These reservations were quickly mollified (see analysis below), and the Team's concern was directed to the question of managerial, organizational and administrative capability to carry out the plan's objectives. This concern reappeared repeatedly in discussions with

knowledgeable persons within and outside the MOPH. It would appear that deficiencies in this area have not yet been overcome, and that external assistance here would be very beneficial to the success of the plan.

On several occasions as the Team discussed the FFYP with individuals within the MPH, it appeared that one unit would be planning for carrying out its portion of the plan, being oblivious of inter-relationships and possible constraints. There appeared to have been initial inputs into the plan by various individuals, and some appeared to be planning on the basis of the initial draft of the plan without being cognizant of the consensus of the FFYP.

2. Comments on Objectives of FFYP:

The following comments are made in connection with each of the several objectives of the FFYP:

(a) Expansion of the System:-

Inasmuch as there is the general consensus that the present operation of the existing 100 Health Centers and 500 Health Stations is seriously deficient, the question naturally is raised regarding the expansion of facilities before correcting known deficiencies in the system. It would require at least the first two years of the FFYP period to plan the training program for Health Assistants; to train the Health Assistants, and to plan and construct 100 new health stations. The question then becomes, can the IEG utilize this time period to clear up some of the deficiencies in the present system?

Some of these deficiencies referred to are lack of supervision of health stations; lack of public health training and orientation of Dressers serving in health stations; and lack of appropriate preventive health service activity by the health center staff. It would appear that if resources were available, this could be a worthwhile activity, and at the same time the MOPH could proceed with planning and implementing the training program for health assistants, as well as planning and constructing new health stations.

(b) Training and Staffing Health Stations with Health

Assistants:

Upon discussing the present stage of planning for this training program, it was quite apparent that there are unanswered questions regarding the source of student stipends; source of capital funds for equipment, vehicles, etc.; and identification of, qualification of, and method of training faculty. In spite of not having resolved these problems, the MOPH expressed a desire to start the training program by March 1974. It would appear more feasible to spend adequate time for planning the training program, i.e., satisfactorily answer many of unresolved questions prior to actually launching the program. This suggestion was concurred in by H.E. Ato Yohannes, Vice

Minister of Health (i.e., to retrain dressers and upgrade their skills while simultaneously training the new health assistants.

3. Improving the System through Decentralization, Increasing the MOPH Budget, Improving Staffing and Supervision, and Integrating Categorical Programs with Basic Health Services.

These actions are essential to the achievement of the FFYP objectives in health. The plan does not distinguish roles and functions between the central, provincial and awraja levels. The existing MOH administrative, organizational and managerial capability should be reinforced through technical assistance in these areas during implementation of the plan.

Regarding integration of categorical programs and basic health services, the Team feel this should follow expansion of the basic health services owing to the time needed to resolve several difficult matters currently inhibiting coordination, particularly between the MBS and the MOH (see below).

4. Improving Maternal and Child Health

The implementation plan is well defined except as to details regarding individual responsibility for activities and functions. Although this is little delineation of family planning (family guidance) services, discussions with individuals at all levels removes all doubt that there is serious interest in increasing activity in this area. It was emphasized however that family planning in Ethiopia must be carried out within the context of, and as an integral part of, basic health services if it is to be

well received by target populations. It is noted in passing that considerable unpublicized family planning is already underway in Ethiopia.

5. Improving School Health Services

There are many areas for potential cooperation and improvement in school health programs, however the plan for doing such comes through as a more or less passive program, e.g., coordinating committee, encourage the taking of certain actions, etc.

6. Improving the National Nutrition Level.

There is no doubt that the Ethiopian Nutrition Institute is an excellent agency to serve in a leadership role in improving nutrition in the country. It possesses the technical expertise, research capability, production capability and the managerial capability to serve as a focus for national nutritional strategy, planning, policy formulation, and research. Their planning in this area seems sound.

7 and 8. Improving Environmental Health Services and Communicable Disease Control Services

These two objectives are tied linked, however the implementation of this and other portions of the plan depend upon available resources, supervision, coordination, consensus of purpose, etc. Overall it appears that these are attainable goals, but it must be emphasized that considerable groundwork is needed in MOEH organizational and managerial strategy.

9. Improving Health and Vital Statistics

There is little doubt in the minds of many that much improvement is needed in collection and reporting of health and vital statistic

data, however, as presented in the FFYP, it is difficult to see how this will be accomplished. During our discussions and review of pertinent documents we were unable to get a good idea as to how the Division of Epidemiology and the Division of Statistics will inter-relate. Also it was not clear as to how each will function individually. The Division of Statistics proposes to place Statistical Clerks in provincial health departments, whereas the Division of Epidemiology proposes to train Health Officers in Epidemiology and base them in PHD's as Epidemiological Officers. It is felt that these two divisions should rationalize their plans. As a case in point, one provincial health officer pointed out that much of his and other staff members' time was spent preparing reports that duplicated each other, or that were not utilized in decision making at central level.

On account of mores and tradition, there is very unsatisfactory reporting of birth and neonatal mortality data. In these deliveries attended by traditional mid-wives (birth attendants), no reporting of birth incidents is made for still births nor for infants who fail to survive for 40 or 80 days after birth. Such a reporting system creates a significant void in vital and health statistics data in this area alone. The setting up of a bureau of biostatistic and a method of reporting and analyzing vital statistics is sorely needed.

To sum this section:

1. The FFYP for health is a rather ambitious one, but not completely impossible of attainment if the MOFH can overcome certain managerial, administrative and organizational problems, plus the willingness to do priority phasing in of activities in the plan. This assessment is based upon the commitment of voluntary agencies and donor countries and agencies to support health activities in Ethiopia, plus sympathetic leaders in the PCO and Ministry of Finance.
2. The expansion of the rural health care delivery system can be looked upon from two sides, namely both internally (existing system) and externally (increasing the number of health facilities). It is no question that both are needed, however it becomes a matter of timing. Inasmuch as existing facilities are believed to be functioning at approximately 50% of capacity, improvement in efficiency of operation and redirection of effort could result in almost doubling of coverage by the existing health facilities.
3. Closer planning and coordination of effort between the voluntary agencies and the MPH could maximize the benefits of health care delivery efforts and resources in Ethiopia. This added to the contribution from donor countries and agencies in health in the country could have profound effect on health care services, with improved planning and coordination of effort.
4. Integrated rural development schemes and integrated rural health delivery schemes will provide reciprocal benefits to

each other. The development of roads, improved transport, increased agricultural productivity, and income distribution will facilitate the expansion and distribution of health services. On the other hand health services should facilitate integrated rural development in making the areas more habitable through such factors as malaria control, environmental sanitation (safe water supply, etc.,) and decreasing incidence of preventable diseases.

ECONOMIC AND FISCAL CONSIDERATIONS

I. Health constraints to development

Some categorical epidemics, like malaria and trachoma, obviously limit productive use of the country's fertile resources. To the extent that public health programs control such diseases they are real contributions to development and eligible for inclusion in benefits assessments. Regretably, the state of art in economic analysis rarely permits exact calculation of the magnitude of their contribution. Economists have not yet succeeded in generating production functions for most social sector activities, particularly those which are health oriented.

Despite the shortcomings of economic methodology it is fairly evident that victims of chronic malaria or advanced onchocerciasis, trachoma, schistosomiasis, etc., cannot perform to their normal ability. It is perhaps less evident, but equally serious in productivity terms, that chronically sick workers are also highly reticent to improvements in work methods, nonformal education, innovation and risk-taking. The green revolution, mechanization, agricultural extension and deficit financing are lost on workers preoccupied with holding their own against disease.

Heavy sickness among agricultural workers can seriously hamper output. If they are well but their families sick, the effect may be the same. Cultural traditions in some regions amplify the negative impact of sickness on production: for example, the father of a deceased child in many rural areas is obliged by custom to refrain from labor for forty days; then, to further drain his resources, he must serve a feast to his neighbors.

The degree to which worker morbidity and premature mortality measurably constrain output and inhibit development depends greatly on conditions of employment opportunity, skill requirements and the nature, location and scope of development projects.

Underemployment and surplus labor pools are still characteristic of much productive activity in Ethiopia. In the Awash Valley, for example, the labor market will probably remain supersaturated by the abundance of nomadic workers throughout the FFYP. Economists do not agree on how to measure the constraint of sickness on output under such conditions; some would disregard it while others would assess its cost according to average wage rates in the area. However, it is noted that even surplus labor pools dry up during harvest, and the impact of communicable disease on output then can be considerable.

A more serious constraint arises out of a sickness among skilled and semi-skilled workers and in development projects that are more mechanized or specialized. Here the disability of one or a few key workers -- say, irrigation regulators -- could endanger a crop or lower the output of all other workers.

Development projects involving geographic relocation of workers are also vulnerable to communicable disease, since they tend toward fuller employment of workers at all levels. This would be true of CADU, WADU, Sheshamane, many of the projects proposed for Illubabor, etc. Projects of this type are likely to become increasingly popular.

As mentioned earlier, the calculation of sickness constraints on development and production -- or of the economic benefits of health sector inputs -- is a difficult, expensive and at best inexact exercise. There is lack of agreement among economists regarding some key elements in calculation sufficient to justify opposing investment decisions, and the procedure itself is heavily biased toward employed males aged 15 to 40; i.e., it is deficient in consideration of social impact and of economic impact to the individual victim. For these reasons we can only note here the sources and types of constraint occasioned by health problems upon economic development objectives. To attempt a rigorous assessment of the degree of such constraint would be beyond the scope of the present assignment. Nevertheless we feel strongly that the health sector is operational upon development; that it is amenable to hard analysis in terms of investment criteria, cost effectiveness and other comparisons of alternative input decisions, replicability tests, etc., and that to disregard it in the planning of development is to invite selective bias and resource misallocation.

II. Economic feasibility of IEG support of the health sector

Historically, financial indicators show sluggish economic growth during the Third Five-Year Plan. Overall increase in GDP and in per capita GDP were about 4.5% and 2% annually, as against targets of 6% and 3% annually. This sluggishness is attributed to unsatisfactory export earnings, low domestic resource mobilization for investment, and insufficient investment promotion and absorptive capacity. In particular, total export earnings rose at a rate of 5.5% (unadjusted) over the TFYP,

as against the 8% rate which is considered to be necessary for a target GDP growth of 6%.

The improvements in foreign exchange required to overcome such conditions depend heavily upon substantial improvement in exports and successful management of imports at constant or diminishing levels. Two major recent events, the closure of the Suez Canal and the IEG decision to maintain parity of the Ethiopian dollar with gold rather than with the U.S. dollar, would seem to incline toward the opposite effect. On the basis of this and similar observations, the IBRD concluded earlier this year that both the short term and long term prospects for improved growth performance were dim. To the extent that this conclusion is accurate, the chances for additional funding of health sector expansion could be deleteriously affected.

The Team are not in agreement with the IBRD analysis. We believe that the improved outlook for foreign exchange earnings within the current year afford a more optimistic conclusion, at least for the near term. Both coffee and non-coffee commodity exports have increased dramatically. In particular, the export demand for pulses appears insatiable. Exports of hides and associated products have also risen, and the long term outlook for wheat export is favorable. Markets for these commodities should remain strong, barring marked recession among importers. Furthermore, Ethiopian imports have remained fairly level over the same period, and we can perceive no pressures to alter this trend significantly in the near term.

The Team are therefore of the opinion that economic conditions in Ethiopia may well encourage expansion of health sector allocation from general

revenue, and we are cautiously optimistic that growth of health sector recurrent expenditure will increase from its historic annual average of 5.8% to about 7%. While the Bank of Ethiopia are known to be quite conservative in their projections of foreign exchange earnings (partly because of the sensitivity characteristic of commodity markets), we are nevertheless assured that the Planning Commission Office intend to press for an increase of that dimension. Barring an unforeseen alteration of defense expenditures (as might be occasioned in a sudden deterioration of relations with Somalia) the Team believe that foreign exchange earnings prospects encourage the higher growth rate.

III. Health as a priority

Health ranks fourth in Ethiopian development priorities (5%-8% of development support), behind access roads (20%-25%), agriculture (15%-20%) and education (15%-18%).

Recurrent expenditures on health run about 1.3% of GDP, a level lower than that of many other countries (see table 1). During EC 1964 the MOPII shows recurrent expenditures of // \$ 24.8 million (about 5.7% of all IEG recurrent expenditures), which averages E\$ 0.95 per capita. These were entirely local funds. Capital expenditures during EC 1964 amounted to E\$ 12.2 million, E\$ 4.9 million from domestic sources and E\$ 7.3 million from external sources. (Since EC 1961, the malaria eradication program has been classified as a capital expenditure).

The Ministry of Finance's report on actual expenditures suggests about 45% of all health expenditures, the Malaria Eradication Program about 28%, basic health services about 15%, and other projects and administration

Table 1: TOTAL RECURRENT HEALTH EXPENDITURE AS A PERCENTAGE OF GNP IN SELECTED COUNTRIES

<u>Country</u>	<u>Recurrent Expenditures on Health as a % of GNP</u>
Israel	5.9%
Chile	5.6%
U.S.A.	5.5%
France	4.2%
U.K.	4.0%
Ceylon	3.7%
Kenya	3.6%
Tanganyika	2.5%
Ethiopia	1.3%

NOTE: Percentages provided are for the fiscal year 1961/62 (G.C.) except in the case of Chile (1961 G.C.), France (1963 G.C.), Ceylon (1957 G.C.) and Ethiopia (1970/71 G.C. or 1963 E.C.). The figures for Ethiopia are computed from the estimated expenditure by the Ministry of Public Health, the Missions, H.S.I. Foundation, and other private and public agencies providing health care (E\$ 55.2 million), a figure which includes capital expenditure and the MEP. GDP is estimated at E\$ 4200 million.

Source: Brian Abel-Smith, An International Study of Health Expenditure, World Health Organization, Geneva, 1967.

Table 2:
SUMMARY OF ACTUAL RECURRENT EXPENDITURE, MINISTRY OF PUBLIC HEALTH, 1960-1964 E.C.
 (in current Ethiopian Dollars)

	1960 E.C.	1961 E.C.	1962 E.C.	1963 E.C.	1964 E.C.
Administration and General Services	E\$ 721,855	E\$ 681,532	E\$ 763,776	E\$ 1,470,624	E\$ 1,351,922
Prince Makonnen Memorial Hospital	58,676	135,279	233,005	306,580	241,825
Hospitals and Clinics in Addis Ababa	3,877,927	3,628,916	4,144,146	4,696,607	4,715,288
Provincial Hospitals & Clinics	7,270,701	7,522,509	8,374,357(a)	9,354,552	10,755,461
Purchase of Equipment & Supplies under credit agreement with KCVO	222,652	-	-	-	-
Exp. Covered by Revenue from Health Tax	5,832,805	4,702,370	4,561,156	4,823,004	4,923,047
Central Lab. & Research Institute	311,000	311,000	311,000	311,000	242,408
Contribution to WHO, Ethio-Swedish Joint Fund	1,475,461	1,873,278	2,177,156	2,437,248	2,598,069
T C T A L	E\$ 19,775,037	E\$ 18,854,884	E\$ 20,564,596	E\$ 23,399,615	E\$ 24,834,024

(a) Of this amount, E\$161,264 was provided by the revenues of the hospitals and clinics.

Source: Appropriate annual issues of Budgetary Revenue and Expenditure for Fiscal Years, Ministry of Finance, Imperial Ethiopian Government.

Table 3:
SUMMARY OF ACTUAL CAPITAL AND RECURRENT EXPENDITURES BY THE
MINISTRY OF PUBLIC HEALTH
1960 E.C. - 1964 E.C.

(in current Ethiopian Dollars)

EXPENDITURE	1960 E.C.	1961 E.C.	1962 E.C.	1963 E.C.	1964 E.C.
CAPITAL	E\$4,038,680	E\$3,891,429	E\$16,189,259	E\$9,840,176	E\$12,242,852
Local Funds	3,451,680	3,165,741	7,253,449	4,874,612	4,920,729
External Funds(a)	627,000	5,725,688	8,930,820	4,965,564	7,322,133
RECURRENT	E\$19,775,087	E\$18,854,884	E\$20,564,596	E\$23,599,615	E\$24,834,024
Local Funds	19,755,087	18,854,884	20,564,596	23,399,615	24,834,024
External Funds	-	-	-	-	-
TOTAL	E\$23,853,767	E\$27,746,313	E\$36,753,865	E\$33,239,791	E\$37,076,886
Local Funds	23,236,767	22,020,625	27,823,045	28,274,227	29,754,753
External Funds	627,000	5,725,688	8,930,820	4,965,564	7,322,133

(a) All external funds identified here are loans, except for the 1962 E.C. figure which comprises loans totalling E\$8,918,020 and a grant of E\$12,800.

Note: The Malaria Eradication Programme was considered a recurrent expenditure in 1960 E.C., and a capital expenditure thereafter.

Source: Appropriate annual editions of Fudgetary Revenue & Expenditure for the Fiscal Years, Ministry of Finance, I.E.G.

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about 12%.^{1/} Capital expenditures during EC 1964 were devoted to the MEP (E\$ 10.5, about 86%), hospitals and clinics (E\$ 0.9, about 8%) and health centers (E\$ 0.8, about 6%). This is a much higher percentage investment in health centers than in previous years (1% in EC 1962, none in EC 1963).

IV. Fiscal considerations in basic health services expansion

A 7% growth rate in recurrent expenditures for health will not assure coverage of the planned expansion in basic health services (BHS). Inflation will absorb part of this increase, and recurrent hospital expenditures may prove difficult to control.

The Steering Committee for the FFYP Health Sector Review forecast a budgetary shortfall attributable to the planned expansion, at the level of E\$ 5 million assuming the historic growth rate of recurrent expenditures, or at the level of E\$ 3 million assuming a 7% growth rate. The Planning Commission Office (PCO) on the other hand feel that the shortfall can be obviated at the 7% growth rate through internal resource rationalization.

In their opinion, rationalization should include:

- 1) holding hospital expenditures constant;
- 2) freezing malaria control expenditures at current levels;
- 3) revising hospital fees; and
- 4) encouraging private health care prepayment schemes.

The Team are of the opinion that rationalization within the Ministry of Public Health is overdue and would indeed be beneficial; but that its degree of success may not meet PCO expectations, and therefore may mitigate a budgetary shortfall but not altogether avoid it. This opinion is

^{1/}Ministry of Finance: Budgetary Revenue and Expenditure for 1964 Fiscal Year.

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based on the following observations:

1) Capital expenditure has been very large on hospitals and negligible on basic health services. During the current year (E.C. 1966) capital expenditures are budgeted at E\$ 2.5 million for hospitals and clinics, against E\$ 0.2 million for BHS. This ratio needs to be diminished. (It is noted that hospital beds in Ethiopia are utilized only about 50% overall, disregarding the fact that the Duke of Harrar Hospital in Addis Ababa has remained empty since its completion three years ago). But capital expenditures for malaria control -- E\$ 9.6 million in E.C. 1966 -- are $3\frac{1}{2}$ times as large as the combined capital budget for hospitals and BHS, and they are not likely to be decreased in near future.

2) Recurrent expenditures are more dramatic than capital expenditures. During E.C. 1966 recurrent expenditures are budgeted at E\$ 14.5 million for hospitals and clinics, against E\$ 8.1 million for BHS. Rationalizing these expenditures will be difficult. They largely reflect salaries, for which pressures are severe in curative institutions. Such pressures undoubtedly will be intensified by desires to render the Duke of Harrar Hospital operational, and by desires for visible achievement amongst the newly appointed awraja administrators (where health care is probably second in priority in public opinion). Recurrent costs for a fully operational Duke of Harrar Hospital are estimated at E\$ 7 million to E\$ 9 million. Most certainly these will have to be borne by the MOPH through most of the FFYP. Provincial hospitals are presently understaffed too, so the rapid employment of the one hundred or so HSIU medical graduates during the FFYP will be irresistible; consequently provincial

hospital expenditures are more likely to be increased than rationalized.

3) Malaria control expenditures will probably hold constant at current levels of effectiveness, but would probably increase substantially in event of a serious reversal.

4) We agree that hospitals and clinics should be more self-supporting as they are in most other countries. Indeed, mission hospitals in Ethiopia do cover about 60% of their costs through patient fees, and hospitals of the HSIF cover up to 80% of their costs through fees. On a similar basis a reconstructed fee schedule for MOPH hospitals might accommodate two thirds to three quarters of their recurrent costs, freeing public resources for more rapid development of basic health services. Whether such restructuring can be accomplished early enough in the FFYP is difficult to determine, given the fact that hospitals service mainly the most affluent minority in Ethiopia's two major cities. The easiest way out of this dilemma might be to turn management of all major public hospitals over to the HSIF.

5) Medical care prepayment is a desirable objective. However, it has proven difficult and time consuming to accomplish even in countries enjoying a relatively high average income base; the problem of attracting private venture capital into this field in countries of highly skewed incomes and a very low income base seems formidable, at least for the near term encompassed in the FFYP.

The Team conclude that the proposed expansion will incur a budgetary deficit if carried out on schedule, probably in the region of

E\$ 2 million to E\$ 3 million. However, the schedule is highly conditional on a number of possible constraints other than financial. We believe it more likely that expansion of BHS will occur much slower than projected and less complete than desired, especially in the early years of the FFYP. Consequently a fiscal deficit arising out of the fact of expansion probably will be of manageable proportion.

V. Constraints to the effective utilization of health resources

1. Internal constraints

In a previous section we have taken the position that effective provision of basic health services offers a potential positive contribution of considerable significance to the progress of economic development in Ethiopia. In our recommendations we will suggest opportunities for relatively minor but specific AID input to assist the MOPH in absorbing and utilizing its own resources as well as available external resources for maximum impact on the health status of the Ethiopian population. In this section we will attempt to identify certain constraints which presently inhibit absorptive capacity, to which AID attention might be addressed.

Two years ago a WHO consultant, Dr. A. Torab Mehra, analyzed a number of problems affecting the operational capability and efficiency of the basic health services.^{1/} Included in his discussion were administrative, financial and managerial difficulties; overcentralization; deficiencies in manpower, planning and distribution of services, operational support and supervision; irregularity or paucity of facilities, environmental sanitation, funding and supply; and lack of career development. It

^{1/}A. Torab Mehra, "Basic Health - Development of Health Services," WHO/BMRO/71/543, EM/PHA/129 (May 1971).

is clear that these problems are all matters of concern to the officials whom we visited in the MOPH and the PCO, and that efforts are underway to overcome them during the FFYP. In particular, the proposed BHS expansion plan is directed specifically toward alleviation of deficiencies in manpower, distribution of health services and paucity of health facilities.

But some of these problems continue to be drags on performance, and their resolution is instrumental to efficient use of the present system as well as the success of the proposed BHS expansion.

A. Administration and Management. The majority of health workers interviewed by Dr. Mehra cited "lack or delay of response due to inefficient communication, traditional administrative bureaucracy and archaic methods of financing" as major sources of anxiety and frustration. To this, Dr. Mehra added a need to increase the technical expertise of the MOPH in order to improve response capability. These problems were echoed by the WHO and UNICEF representatives, by various voluntary organizations and by other departments in the IEG as major impediments to health service delivery. Two agencies crucial to the agglomeration of MOPH resources indicated that the MOPH exhibited difficulty in developing detailed plans for the request, use and evaluation of health sector inputs. There also appear to be separate spheres of influence at top levels in the MOH, with deficiencies in communication and coordination between them. Alleviation of these difficulties should command top priority in improving health service delivery, as they give rise to or exacerbate many of the other constraints to be mentioned. Technical

assistance in the form of advisors on administrative reform would be a distinct asset, if the MOPH are prepared to follow through on their recommendations.

B. Supervision. Technical supervision and evaluation at all levels of the structure -- MOPH to provincial units, health centers to health stations, etc., -- needs reinforcement and some redirection from an emphasis on control to an emphasis on problem solving and improvement. The FFYP envisions quarterly supervisory visits to health stations; we feel this would be too infrequent for the reinforcement that is necessary. Consistent, frequent, regular supervision, inservice training, evaluation and demonstration is needed; external assistance in this area would be an important aspect of improved health service utilization.

C. Logistics. The topography of Ethiopia represents a substantial barrier both to health services delivery and to personal contact between elements of the health service structure. Not all health stations are served by roads, and the MOPH suffers inadequate transport for the roads that exist. Lack of vehicle maintenance and operating supplies has proven an impediment to the acquisition of additional vehicles. There is also a dearth of communication channels. The patient referral mechanism is ill defined and inadequately used. UNICEF has provided vehicles in the past, and may be willing to provide more vehicles and spare parts to reinforce supervision and patient referral if the MOPH present an acceptable use and maintenance plan. The MES repair facilities can service these vehicles free of labor charge if the MOPH will cover repair equipment costs and arrange to oversee repair processing.

D. Training facilities. Affiliation with HSIU has given an overly strong theoretical bent to the Gondar curriculum. Considerable sentiment was expressed for a more practical modification of the present curriculum and a reorganization of teaching staff. Training facilities for the new health assistants have not yet been identified, but there was general agreement for the selection of three sites, not including Gondar, in or near locations important to health service supervision. Teaching staff for the health assistants may become a problem; the MOPH hope to deploy enough medical officers to meet the requirement, although some external assistance may be needed.

E. Construction of health stations. The Elementary School Construction Unit may be available for health station construction if funds are available. IDA-4 may be a source of funding for health station construction. The projected cost of health stations seems a bit high; an expert study could well be directed to construction standards, materials and self-help opportunities. Potable water and proper sanitation should be provided at every health station if it is to be effective in community public health instruction. We were unable to ascertain what accommodation is envisioned.

F. Supplies and funds. There are indications that irregularity and inadequacy of medical and public health supplies, and of operational funds, continues to be a problem. Although this problem could constrain the effectiveness of the proposed expansion, corrective action is not specified in the FYYP. Administrative viscosity, referred to above, is also believed

to diminish effective utilization of funds allocated. Although under-financing is often cited as a cause of limited service delivery, basic health services allocations have been returned in previous years. (In E.C. 1964, for example, only E\$ 7.1 million of the E\$ 8.1 million allocated for basic health services was actually spent.)

G. Curative emphasis. The FFYP provides for the assignment of two health assistants to each health station, and a schedule of activities that includes suitable assignment of public health and MCH activities, in an effort to overcome the preoccupation with curative medicine that has characterized past health station performance. However, it is feared that demand for curative services may still overwhelm the new health assistants absent a mechanism for reinforcing this schedule. A suggestion was made for separate assignments in public health and curative services to the two health assistants, and for rotation of the assistants in their assignments.

H. Lack of coordination with non-governmental organizations. There is no means available for coordinating the supply of services or rationalizing resource allocation between Government and non-government facilities.

2. Economic Development Constraints

As lack of health services inhibit the performance of economic development so do lack of other elements of economic development inhibit the performance of the health service structure. The provision of medical supplies, supervision and medical referral depend heavily upon roads and transport to the affected populations. Potable water and

sanitation are prerequisites to effective preventive health; a majority of the preventable communicable diseases that cause 70% of the medical caseload in Ethiopia can be traced to impure water and lack of sanitation. A marketing infrastructure could facilitate private provision of disease prevention measures. Non-formal educational opportunities would greatly assist efforts to overcome health-endangering customs and encourage disease prevention.

Minimum package programs -- components of roads, markets, education and agricultural support believed to be essential to development "take-off" -- have been conceived for encouraging market farming in new development areas. The absence of provision of both preventive and curative health services from minimum package programs is conspicuous. We strongly recommended consultation between MOEH and the other ministries involved to determine the types and extent of health services suitable for development enterprises, and their inclusion in future development schedules and budgets.

VI. Availability of external assistance

International and private organizations expressed willingness to offer substantial external assistance to health sector expansion and revitalization on condition of assurances for proper use and follow-through. All of them emphasized the prerequisite for such assurances through detailed use and maintenance plans, schedules and trial runs, owing to past disappointments and current disenchantment with MOEH administrative practices.

WHO may be receptive to MOPH requests for technical assistance and for overseas advanced training of Ethiopians in order to ameliorate specified deficiencies in technical expertise within the MOPH, providing (1) the experts retained will be placed in influential posts, (2) counterparts will be trained to assume their duties, and (3) the MOPH will develop an employment plan and schedule to assure optimum utilization of the nationals trained abroad.

UNICEF are receptive to requests for a variety of inputs (beyond their commitments for drugs and supplies for control of TB, trachoma and leprosy), subject to WHO recommendation and to the conditions specified below:

<u>UNICEF Input</u>	<u>Condition</u>
1. Landrovers for health center supervisors	Improvement in MOPH vehicle management and maintenance; new transport agreement
2. Drugs and dietary supplements for new health stations; financing of supplies for existing health stations.	New management system for expendable supplies.
3. Supplies, equipment and drugs to 26 rural hospitals; pilot supply of vehicles to 6.	Transport to be continued in other hospitals if effectively used in first 6.
4. Training of 900 health assistance: stipends, teaching and demonstration equipment, transport.	Training plan and schedule; adequate training of teachers (which UNICEF would also assist).
5. Training of traditional midwives: stipends, honoraria, midwifery kits.	
6. Training of Health Officers to start epidemiology service: 6-month initial training, transport, supplies (WHO to provide advanced training).	

<u>UNICEF Input</u>	<u>Condition</u>
7. Inservice refresher training and allied activities.	
8. Pumps for rural water supply, facilities for well protection and for testing of wells and springs.	Construction of wells.
9. Soya processing equipment for Ethiopian Nutrition Institute.	
10. For distribution of drugs and supplies: short term consultant on supply, logistics, organization and control; 8 volunteers to run and maintain supply vehicles; 8 medium weight trucks.	IEG provision of one pharmacy assistant in each provincial health department; suitable store premises; personnel for storekeeping; IEG reorganization of budget and purchasing of medical supplies; provision for IEG continuation after five years.
11. Expansion of 2-way radio network to all health centers and mobile units within 5 years.	Approval of Ministry of Communications.

The Ethiopian Women's Welfare Association are prepared, with UNICEF backing, to train 140 traditional midwives per annum to a total of 700. SIDA is seriously contemplating a pilot project for the training of traditional midwives in Arussi, Illubabor and Gojjam provinces.

The Ethiopian Elementary School Construction Unit may be available for health station construction if funds are available. IDA-4 may be a source of funds for this purpose.

The Malaria Eradication Service are willing to repair MOPH vehicles free of labor charge if the MOPH will supply spare parts and repair equipment, and oversee repair scheduling and operation. UNICEF are willing to supply the spare parts.

All of the major mission and voluntary organizations are interested in coordinating their operations in accordance with an MOPH master health plan for improved efficiency and effectiveness.

VII. Distributive Aspects of the Health Plan

Addis Ababa, containing 4% of total Ethiopian population, receives 29% of health services expenditures. Asmara, with 1% of the population receives 14% of health services expenditures. The remainder of the country, containing 96% of the population, receives 57% of health services expenditures. Hospitals, which are concentrated in urban centers containing less than 6% of the total population, consume 50% to 60% of total health expenditures.

Basic health services -- preventive, MCH and curative care to persons outside major urban areas -- now reach an estimated four million Ethiopians. The primary health goal of the FFYP is to increase this coverage by $2\frac{1}{2}$ million, to approximately $6\frac{1}{2}$ million Ethiopians. No further hospital expansion is envisioned during the FFYP, and an attempt will be made to hold hospital expenditure constant (and if possible to rationalize curative services), while increasing allocations to basic health service operations.

To the degree that the FFYP health goals are achieved, the distributive effect will be very positive and the beneficiaries will be mostly low income and subsistence families and individuals who otherwise lack access to scientific means for prevention and cure of disease and debilitating health conditions. These goals accord with current AID emphasis to support low cost integrated Health/Nutrition/Population delivery among populations in greatest need.

VIII. Coordination of the Malaria Eradication Service with Basic Health Services

The advantage of coordination for BHS are well known: improved transport, more complete epidemiological surveillance and activity, more precise administrative control, expanded prevention of other communicable diseases. The benefits that might accrue to MES may not be so well appreciated. The Team believe that under favorable conditions, the public health contribution to the success of malaria control could be considerable.

The Malaria Strategy Review Report (1970) observed that some of the factors limiting success of the anti-malaria campaign were socio-economic in nature and amenable to mitigation through active health education and prevention activities. Holly⁽¹⁾, delineated the marked difference in malaria caseload between the HVA sugar estates, which practiced strong preventive measures (2%-4%), and nearby agricultural development projects which did not (estimated 25%-30%). Chang,⁽²⁾ in a paper to be published in 1974, reports a sample survey in which only 24% of urban interviewees, and only 7% of rural interviewees, attributed malaria to mosquitos. It would seem that both MES and BHS could gain significantly from coordination if favorable conditions prevail.

"Favorable conditions" would include incorporation in the coordination plan of measures to guard against deterioration of effectiveness for both services. At present, MES is particular are apprehensive that coordination could generate drains or diversions of their resources for support or rehabilitation of health stations sufficient to reduce current MES effectiveness in controlling malaria. This apprehension derives in part from their observation of BHS deficiencies in logistics, administration, preventive impact and delivery of pharmaceuticals and supplies to existing facilities, and from reversals in malaria control programs of certain other countries.

(1) N. Holly, "Economic Benefits of Malaria Control in Ethiopia, internal report to USAID/Ethiopia, (stencil), 1970.

(2) W.P. Chang, "Report on Population Studies in Ethiopia," Journal of Ethiopian Studies, Vol. 12, No. 1 (1974)

Opinions have also been expressed that sharing of MES resources, as might be essential to full coordination, may be precluded under the terms of the AID-MES agreement. This point needs clarification.

Furthermore, MES are of the opinion that the MPH are not highly motivated toward full coordination and cite the following:

- 1) Mes suggestions for possible areas of coordination, in response to MPH inquiry three years ago, were not followed up;
- 2) MES have been willing to undertake BHS vehicle repair in their four outlying facilities (Bahar Dar, Nazareth, Dire Dawa and Gondar) and in their main facility in Addis Ababa free of labor charge, if MPH pay the cost of replacement parts; but MPH payment for parts has been historically lax;
- 3) MES recommended that MPH assign one employee to oversee and expedite BHS vehicle repair in MES facilities, but this recommendation has not been implemented.

MES are willing to discuss ways of achieving coordination during the FFYP, as evidenced by previous letter of commitment and by the joint MES-MPH meeting in December, 1973, on steps necessary for coordination. However, several sources indicate that MES would prefer to achieve coordination in the "next go-around" (Fifth Five-Year Plan).

The Team are of the opinion that plans for coordination would probably not be implemented or may possibly be resisted during the FFYP absent (1) strong evidence of MPH commitment for coordination; (2) strong and continued

MPH pressure and follow-up on steps to coordination; and/or (3) persuasion from AID via condition precedent to continued funding of commodities (which has been considered and evidently rejected).

IX. Utilization of indigenous practitioners in service delivery

There are four dominant categories of indigenous practitioners in Ethiopia: traditional midwives; wogeshas (surgeon-herbalists); debteras (religious spirit healers); and zars (spirit healers).

Traditional midwives have been trained and employed successfully by missionary PVO's and the EWNA. Very little contact has occurred with other types of indigenous practitioners and very little is known about them.

The MOPH see several constraints to utilization of wogeshas, debteras and zars in basic health service expansion during the FFYP:

- (1) the present incapacity of the MOPH to provide for their training, supervision and service payment concurrent with their anticipated financial commitments for expansion;
- (2) MOPH minimum recruitment standards for health delivery personnel;
- (3) difficulty of discouraging some undesirable but popular indigenous practices such as uvula cutting, canine teeth extraction for infant diarrrhia, female circumcision, improper umbilical cord packing, etc.;
- (4) reluctance of many indigenous practitioners to associate with scientific health care, often for fear of losing their healing powers or prestige.

Nevertheless, there is no doubt that indigenous practitioners enjoy a considerable following, and isolated instances have been reported where most of the population in an area were said to avoid a nearby health station because the local wogesha was not represented on its staff.

In view of the scant knowledge of indigenous practitioners, and of the majority of Ethiopians who will lack alternative access to health care during the FFYP, the Team recommend that research be underwritten that would describe: numbers and locations of the various types of indigenous practitioners; types of services performed; prestige among the population including contact of choice; actual utilization; reporting requirements or absence thereof; incidence and causes of adverse reactions, morbidity and mortality resulting from services delivered; constraints to and possibilities for their absorption.

INDICES OF HEALTH AND POPULATION FOR ETHIOPIA

Crude birth rate	50 per 1000 population	
Crude death rate	25 per 1000 population	
Infant mortality rate	195 per 1000 live births	
Death rate of children 1-5 years	50 per 1000	
Maternal mortality rate	20 per 1000 live births	
Average life expectancy	37 50 38 years	
General fertility rate	215 live births annually per 1000 women ages 15-49	
Total fertility rate	6.6 live births per woman in fertility	
Gross reproduction rate	3.2 live female births per woman in fertility	
Natural annual rate of population increase	25 per 1000 population, doubling in 27 years	
Urban annual rate of population increase	65 per 1000, doubling in 11 years	
1971 population (est.)	24.9 million	
1975 population (est.)	27.6 million	
Child Population profile:	46% children below 15 years in age 18% children below 5 years in age 17% children ages 7-12 (primary school)	
Literacy	6.6%, overall; 11.6% of all males; 1.7% of all females	
Marital status of women more than 10 years in age:	<u>Rural</u>	<u>Urban</u>
	Unmarried	23.5%
	Married	45.1%
	Widowed	9.5%
	Divorced	21.6%
	17.8%	
	67.6%	
	8.1%	
	6.4%	

Source: Population of Ethiopia: Results from the National Sample Survey, First Round, 1964-1967. Central Statistical Office, Addis Ababa, 1971.

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REFERENCE MATERIALS

- Ministry of Public Health, "Fourth Five Year Development Plan" (Stencil), June 29, 1973.
- Ministry of Public Health, "Health Sector Review: Report of the Steering Committee of the Health Sector Review," 3 parts, (stencil), April 17, 1973.
- Ministry of Public Health, Fourth Five Year Plan Health Sector Review: Report of the Sub-Committee on MCH and Nutrition" (stencil), February 28, 1973.
- Mehra, Dr. A. Torab, Basic Health - Development of Health Services (WHO Assignment Report), WHO/EMRO/71/543, EM/PHA/129, May 1971.
- Perabo, Dr. Franz, Maternal and Child Health Service in Ethiopia (WHO Assignment Report), March 1972.
- Chang, Dr. W-P, "Development of Basic Health Services in Ethiopia," 68 Journal of the Formosa Medical Association, June 28, 1969.
- Chang, Dr. W-P, "Report on Population Studies in Ethiopia," 12 Journal of Ethiopian Studies (January 1974).
- Chang, Dr. W-P, "Health Manpower Development in an African Country - the Case of Ethiopia" (unpublished), 1969.
- American Public Health Association, Field Survey Report of National Voluntary Health Organizations in Ethiopia, Kenya, Nigeria, Dahomey and Tunisia, December 29, 1972.
- Dr. Widad Kidane Mariam and Moen, Ahmed, "Government Health Services in Ethiopia and the Role of Medical Graduate in It," 10 Ethiopian Medical Journal 117, 1972.
- Dr. Widad Kidane Mariam, "Maternal and Child Health Services and the Agricultural Workers" (unpublished), September 1973.
- Spruyt, Dirk J., et a., "Ethiopia's Health Center Program - Its Impact on Community Health," 5 Ethiopian Medical Journal 1, July 1967.
- United Nations Development Program, "Report on Development Assistance to Ethiopia in 1970" (stencil), n/d.
- Ethiopian Nutrition Institute, Progress Report, 1972.
- UNICEF, "Ethiopia and Somalia: Preview of Future Programme Possibilities" (stencil), August 1973.
- UNICEF Regional Office, Nairobi, "UNICEF in Ethiopia," n/d.
- American Council of Voluntary Agencies for Foreign Service, Inc., "A Listing of U.S. Non-Profit Organizations in Medical and Public Health Assistance Abroad," April 1973.
- AID/PH/PVC, "Directory of U.S. Private Non-Profit Agencies Programs in Africa" (stencil), September 15, 1972.

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