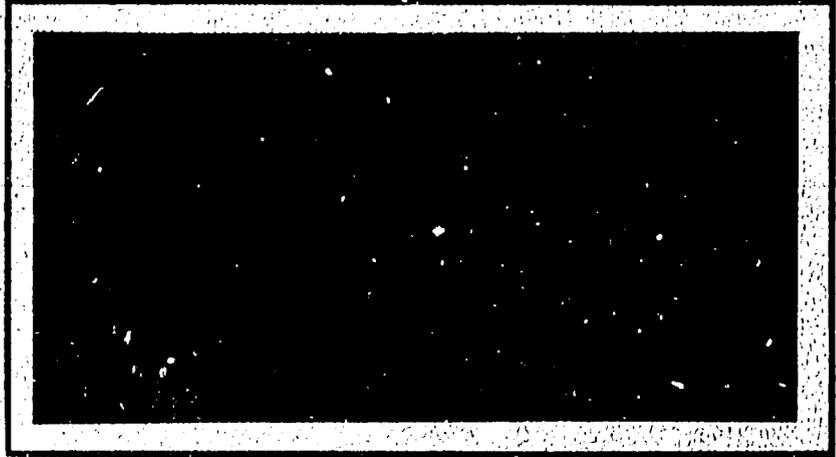


| BIBLIOGRAPHIC DATA SHEET | | 1. CONTROL NUMBER PN-AAH-380 | 2. SUBJECT CLASSIFICATION (695) NH00-0000-G324 |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------------------|---------------------------------------------------|
| 3. TITLE AND SUBTITLE (240) Evaluation of the Division of Family Hygiene's MCH/FP program, Haiti | | | |
| 4. PERSONAL AUTHORS (100) Kennedy, John; Klein, Susan; Lundeen, Kirsten; Rosenzuaig, Fanny; Smucker, J. N.; Verly, Adeline | | | |
| 5. CORPORATE AUTHORS (101) Am. Public Health Assn. | | | |
| 6. DOCUMENT DATE (110) 1979 | 7. NUMBER OF PAGES (120) 148p. | 8. ARC NUMBER (170) HA614.5992.K35 | |
| 9. REFERENCE ORGANIZATION (130) APHA | | | |
| 10. SUPPLEMENTARY NOTES (500) | | | |
| 11. ABSTRACT (950) | | | |
| 12. DESCRIPTORS (920) Program evaluation Haiti Maternal/child health Family planning Health planning | | Child care Health delivery | 13. PROJECT NUMBER (150) 932087700 |
| | | 14. CONTRACT NO.(140) AID/pha - C-1100 | 15. CONTRACT TYPE (140) GTS |
| | | 16. TYPE OF DOCUMENT (160) | |

PN-AAH-380



AMERICAN PUBLIC HEALTH ASSOCIATION
International Health Programs
1015 Fifteenth Street, N.W.
Washington, D.C. 20005

EVALUATION
of the
DIVISION OF FAMILY HYGIENE'S
MCH/FP PROGRAM, HAITI

A Report Prepared By:

John Kennedy, M. D., M.P.H.

Susan Klein, M. P. H.

Kirsten Lundeen, R. N., M.S.

Fanny Rosenzuaig, M. D., M.P.H.

Jacqueline Nowak Smucker, M.S.S.A.

Adeline Verly, M.D., M.P.H.

During the Period:

September 19 - October 16, 1979

Under the Auspices of:

AMERICAN PUBLIC HEALTH ASSOCIATION

AUTHORIZATION:

Ltr. POP/FPS: August 9, 1979
Assign. No. 1100-171

Supported By:

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
OFFICE OF POPULATION, AID/pha/C-1100

Agency for International Development
Library
Room 105 SA-18
Washington, D.C. 20523

C O N T E N T S

| | Page |
|-----------------------------------------------------------------------|------|
| I. EXECUTIVE SUMMARY | 1 |
| Terms of Reference | 1 |
| Background | 1 |
| Assessment of Progress and Current Status of the Program | 4 |
| Recommendations | 6 |
| II. INTRODUCTION | 7 |
| Terms of Reference | 7 |
| Objectives | 7 |
| Team Composition and Plan of Work | 7 |
| Preliminary Activities | 9 |
| Follow-up Activities | 9 |
| Technical and Administrative Support | 10 |
| Background Documents | 11 |
| Composition of the Team | 12 |
| Work Performed and Methodology | 15 |
| Documents Reviewed | 17 |
| Rural Health Delivery System | 17 |
| Operations Manuals and Training Curricula | 18 |
| Special Studies | 19 |
| III. REVIEW OF PAST ACTIVITIES OF THE MCH/FP PROGRAM | 20 |
| Background | 20 |
| Division of Family Hygiene (DFH) | 21 |
| Work with Donor Agencies and Haitian Government | 22 |
| Structure and Operations | 23 |
| Reporting and Executing of Functions | 24 |
| Development of National MCH/FP Program | 26 |
| Pilot Project, March, 1973 to July, 1974 | 26 |
| Phase I, April, 1974 to December, 1975 | 27 |
| Phase II, January, 1976 to Present | 31 |
| Evaluation | 38 |

Contents, cont.

| | Page |
|------------------------------------------------------------------------------------|------|
| IV. ASSESSMENT OF THE CURRENT SITUATION | 43 |
| Strategy Planning Level | 43 |
| General Considerations | 43 |
| The GOH Health Budget: Allocation of Funds and Effects on Services | 44 |
| Foreign Assistance Past and Future | 45 |
| Coordination: Past and Present Problems | 45 |
| Division of Family Hygiene: Its Organization, trengths and Weaknesses | 46 |
| Management Level | 64 |
| Financial Systems | 64 |
| Logistics Systems | 64 |
| Information Systems | 65 |
| Operational Level | 65 |
| Overview | 65 |
| Supervision at Dispensary and Community Levels | 66 |
| Supervision at Higher Levels | 67 |
| Logistics | 67 |
| Vehicles | 67 |
| Supplies | 68 |
| Equipment | 69 |
| Dispensary Support | 71 |
| Information Systems | 72 |
| Patient Recordkeeping Procedures | 72 |
| Filing and Retrieval of Records | 73 |
| Compilation of Statistics | 73 |
| Fiscal Procedures | 74 |
| Fee Collection | 74 |
| Cash Control Systems | 75 |
| Patient Education | 76 |

Contents, cont.

| | Page |
|-------------------------------------------------------------------------|------|
| Personnel | 76 |
| General | 76 |
| Physicians | 77 |
| Nurses | 78 |
| Auxiliaries | 78 |
| Health Agents | 79 |
| Community Agents | 80 |
| Human Resource Development | 81 |
| Physicians' Training | 81 |
| Nurses | 82 |
| Nurse Auxiliaries | 82 |
| Health Agents | 83 |
| Matrone Training | 84 |
| Assessment of Types of Services Provided in MCH/FP Program | 86 |
| Pediatric Services | 86 |
| Family Planning Services | 88 |
| V. RECOMMENDATIONS | 97 |
| Strategy and Planning Level | 97 |
| Management Level | 109 |
| Operations Level | 120 |
| APPENDICES | |
| Appendix A: Training of Health Agents | 130 |
| Appendix B: Household Distribution Pilot Project | 134 |
| Appendix C: Haiti's Five-Year Health Plan, 1975-1980 | 138 |

I. EXECUTIVE SUMMARY

I. EXECUTIVE SUMMARY

Terms of Reference

A joint Government of Haiti, the United Nations' Fund for Population Activities, the Pan American Health Organization, and the Agency for International Development evaluation reformulation of the Haitian Maternal Child Health/Family Planning (MCH/FP) program was conducted by John Kennedy, M.D., M.P.H.; Susan Klein, M.P.H.; Kirsten Lundeen, R.N., M.S.; Fanny Rosenzuaig, M.D., M.P.H.; Jacqueline Nowak Smucker, M.S.S.A.; and Adeline Verly, M.D., M.P.H., during the period September 19 - October 16, 1979. The purposes of the evaluation were to:

- Review and analyze past program activities and achievements of the Division of Family Hygiene (DFH);
- Assess the current status of MCH/FP activities in quantitative as well as qualitative terms;
- Identify and discuss problem areas and specific impediments to service delivery;
- Discuss future strategies in MCH/FP with Haitian program officials; and,
- Draft a report and list of recommendations which may serve as a guide for future MCH/FP activities in Haiti. The recommendations should specify the role of the DFH and decentralized services and the inputs required from each donor for the continuation and strengthening of the national MCH/FP plan.

Background

The Division of Family Hygiene (DFH) was incorporated into the national health system of Haiti by the law of August 26, 1971. It is a technical support division within the Department of Public Health. As such, it can prescribe standards (norms), establish methodology, conduct applied research and plan and coordinate external assistance.

Its programs must be implemented through the existing health delivery system, which is weak and in a transitional phase under a new plan for decentralization that will incorporate the country's 11 districts into five regions. The division is also in the process of being integrated within the Department of Health, where other divisions--notably, the Bureau of Nutrition, the Division of Nursing and Paramedical Training, and the Division of Statistics--have functions which overlap those of the DFH.

The MCH/FP program was developed in three stages:

1. A pilot project, March, 1973/July, 1974, limited to the University's Maternal and Child Health Center and the Isaie Jeanty Maternity Unit, both in Port-au-Prince.
2. A Phase I of the actual program activities, April, 1974/December, 1975, which extended the program to 18 more health installations, mainly in provincial urban areas spread throughout the country.
3. A Phase II of the program, January, 1976/until the present, which attempted to extend to the rural areas from the provincial urban sites established during Phase I.

The objectives and targets of the program have remained constant (although the population covered has expanded), namely:

1. To increase prenatal coverage of pregnant women from 10 percent to 75 percent and immunize all pregnant women seen in prenatal care against tetanus (at least two shots per pregnant woman).
2. To increase the utilization of maternity beds from 20 percent to 80 percent of capacity.
3. To improve home delivery for rural women, by training the traditional matrones.
4. To provide postpartum care to 50 percent of recently delivered women.
5. To increase the percentage of children under five immunized against diptheria, whooping cough, tetanus, tuberculosis and polio from 10 percent to 80 percent.
6. To provide health screening for 80 percent of children under five, with particular attention to identification and management of malnutrition.
7. To supply family planning services for 20 percent of women aged 15-44. (It was expected that 10 percent of family planning acceptors would be male.)

The measures used to accomplish the above objectives were:

1. The provision of MCH/FP supplies, equipment and vehicles.
2. Salary supplements.
3. Training of staff both in-country and abroad.
4. Preparation and publication of standards and manuals for administrative procedures; training of staff; supervision; data collection; statistical compilation and reports; and immunization and nutrition.
5. Production of material and use of communication media for education of the public.
6. Field visits and supervision.
7. Research studies.
8. Use of mobile teams and community agents.

In addition to the clinic-based services, the program also experimented with the following methods of extending family planning services outside of the health structure:

1. Household distribution of contraceptives (pills, condoms and foam) by nonhealth agents.
2. Community-based rural and urban service units, using collaborateurs and volunteers; identification of each target group by household; and a follow-up system for recruitment of clients for MCH/FP services.
3. A four-year study in the Petit-Goave area of the delivery of low-cost MCH/FP services by the use of para-professionals, working in collaboration with community volunteers under a system of community organizations.
4. A commercial program for sale of condoms (2¢ each) by use of condom machines in Port-au-Prince.
5. Extension of MCH/FP services through medical units of the army.
6. Extension of family planning services into factories.

During the last five years, total foreign assistance to the MCH/FP program has been about \$6.5 million. The bulk of this (approximately 45 million) has been provided by the United Nations agents (UNFPA and PAHO). AID's contribution has been relatively small, averaging approximately \$250,000 a year for a total of approximately \$1 million. Smaller inputs came from the Pathfinder Fund, the Center for Research for International Development (Canada) and Brot fur die Welt (Germany). Although the GOH is credited with contributing more than half of the cost of the program, most of this (other than that for base salaries) came from generated counterpart funds. The Department of Public Health only has an annual nondevelopmental budget of about \$8.4 million (i.e., about \$1.70 per capita for all its health programs). This represents approximately 11 percent of the total GOH budget--a relatively high proportion compared with that of most lesser developed countries.

Haiti is one of the poorest countries in the Americas, with a per capita annual income of only 136 United States dollars (1976). Its infant mortality rate is estimated at 137 per 1,000 live births (IHS, 1973)--the highest in the Americas--and a maternal mortality rate of 32 per 10,000 in 1976 (DFH, 1978). This is three times the rate found in such American countries as Paraguay. In 1978, only 17 percent of births occurred in health facilities supported by the government. One can assume that 10 percent of deliveries take place in private hospitals. The remaining 73 percent of the women give birth with the assistance of the traditional midwife (matrone) or are unattended. Perhaps 50 percent of Haitian children have some degree of protein-caloric malnutrition. Tetanus of the newborn, high rates of diarrhea and untreated respiratory infection account for most of the excessive deaths in young children. Pregnant mothers are frequently anemic and an estimated 90,000 to 120,000 Haitians are infected with tuberculosis. This is the climate under which the five-year MCH/FP program has been operating.

Assessment of Progress and Current Status of the Program

During the first two years, the MCH/FP program met most of its quantitative targets, but at the end of Phase I the evaluation team noted many weaknesses, including numerous administrative and logistical deficiencies (e.g., defects in training of staff, lack of coordination and integration within the Department of Public Health and with external donors, failures in education and relationships with the public).

In Phase II, when the program tried to extend into peripheral rural areas, these weaknesses became more apparent, and they have persisted to the present time.

As the population base expanded, relatively smaller portions of the population received services, and the program's progress, in quantitative terms, leveled off. Because of its numerous field observations, the present evaluation team was able to take a deeper look into the program with respect to the quality of the services offered. The team found serious defects in logistical

support, crucial gaps in the provision of essential drugs, indifferent performance by many of the staff as evidenced by failures to weigh babies, unsterile techniques in immunizations, lack of proper examination of pregnant women and little face-to-face public education. At the higher levels of planning and management, there was serious lack of coordination of parallel programs within the Department of Health and uncoordinated efforts by donor agencies. Public acceptance of and support for the program was generally poor.

The team identified the following as the major causes of program failures:

1. Lack of properly trained and motivated administrative and support staff at district levels, with resulting inadequate support to peripheral units.
2. Failure to involve the people of rural communities, resulting in lack of popular understanding and support.
3. Inadequate and sometimes incorrect training of the technical staff, particularly of the auxiliaries at the dispensaries and of the health agents at community levels.
4. Extensive dependence on the doctors and resident physicians, who lack motivation, interest and indoctrination in rural public health administration and who provide poor leadership and direction.
5. Serious gaps in supplies and equipment and a poor system for the repair or replacement of broken equipment.
6. Inconsistencies in administrative practices, such as fee charges, which tend to alienate the rural poor.
7. Insufficient and often incorrect public education.

The program has, from an overall viewpoint, also been distorted and disrupted by unsynchronized efforts in both the Department of Public Health and from external donors. Efforts to strengthen the existing health delivery system without reference to the parallel systems that have evolved from the MCH/FP program have resulted in fragmented and nonintegrated services.

Recommendations

The team has detailed its recommendations relevant to the levels of strategy planning, management and operations. The section on recommendations can be located readily in the report by the use of a tab marker. Each recommendation is accompanied by a brief discussion of its rationale and a guide for implementation. The reader who needs a quick overview should peruse the recommendations at his/her level of responsibility and interest.

II. INTRODUCTION

II. INTRODUCTION

Terms of Reference

In the summer of 1979, terms of reference were drafted for an evaluation and reformulation of the Haitian MCH/FP program.

A. Objectives

1. Review and analyze past program activities and achievements of the Division of Family Hygiene (DFH).
2. Assess the current status of MCH/FP activities in quantitative and qualitative terms.
3. Identify and discuss problem areas and specific impediments to service delivery.
4. Discuss future strategies in MCH/FP with Haitian program officials.
5. Draft a report and list of recommendations which may serve as a guide for future MCH/FP activities in Haiti. The recommendations should specify the role of the DFH and decentralized services and the inputs required from each donor for the continuation and strengthening of the national MCH/FP plan.

B. Team Composition and Plan of Work

The team will be made up of Haitian program officials to be chosen by the DFH and five international consultants contracted by APHA. One of the Haitian team members, Dr. Adeline Verly, Assistant Director, DFH, will be assigned full time to the team; the others will be available and assigned as needed according to specialty area. The five international members will include one health administrative specialist and four specialists in MCH/FP and community health. Recruitment should be based on experience rather than on academic credentials alone.

The administrative specialist will be based primarily at the DFH but will travel as necessary to examine administrative procedures throughout the national MCH/FP system. His analysis will focus on the following activities of the DFH:

- the administrative structure and norms;
- the supervisory system;
- the statistics and evaluation section;
- the administrative aspects of IEC activities;
- the logistics and supply system;
- the planning capacity; and,
- past and future training activities for administrative personnel at all levels.

The four MCH/FP and community health specialists and the one permanent Haitian team member will visit a sample of service delivery outlets at all levels to analyze current activities in terms of quantity and quality and to identify obstacles to the delivery of services. These outlets will include hospitals, health centers, dispensaries, health agents, mobile units, satellite clinics and nutrition centers. Specific areas for examination will include:

- adequacy and application of technical norms;
- level and appropriateness of technical preparation and in-service training;
- adequacy of supervision as perceived by operational-level staff;
- type and appropriateness of IEC activities; and,
- data collection, processing and utilization at the local level.

To guide the analysis of technical and administrative activities the team will be provided with a form designed for each level of service. However, the approach will focus on the identification of the strengths and weaknesses of the system rather than on formal data collection.

The team members working in the field should meet regularly with the administrative specialist to discuss problems observed at the periphery and originating at the central level. For example, the adequacy or inadequacy of supervision would be identified at the periphery but should be addressed at the central level. Similar patterns may exist for other components, such as supply, training or statistics.

In addition to the above activities, the team will consider the multi-sectoral and the community approaches. The multisectoral approach includes the army and factory distribution activities. The community approach is based on a unit system in which clearly defined population units, both urban and rural, are served by community agents or neighborhood workers. It also includes the pilot projects for household and commercial distribution.

To ensure coordination between the team and the Haitian program personnel, there will be an initial briefing session at DFH and periodic meetings (weekly is desirable) with the DFH staff to exchange information and insights. There will also be meetings between team members, the DFH staff, and officials of the Department of Public Health (DSPP) to discuss the problem areas highlighted by the team. Based on its findings, the team will make recommendations for the national MCH/FP plan, including specific guidelines for future policy, norms, activities and the roles of all participating governmental and international institutions. In order to make recommendations for future MCH/FP activities in Haiti, it is crucial that the team become acquainted with those structures within the DSPP, which will be responsible for the gradual assumption of MCH/FP program activities under the new integration plan of the Ministry of Health.

C. Preliminary Activities

Prior to the team's arrival in Haiti, Ms. Andrea Klein and Mrs. King Morgan (PAHO/Washington) will travel to Haiti to prepare background material for the team's work in collaboration with local officials of PAHO (Dr. Solum Donas), AID (Ms. Barbara Ormond) and the DFH. Based on data available at the central level of the DFH, a summary of 1977, 1978, and first-semester 1979 service and financial data will be completed and made available to the team on arrival. Further preliminary activities will include drawing of a sample of service delivery outlets to be visited by team members and the preparation of information packets for each sampled outlet. These packets will contain relevant available data, service norms and targets and any other necessary information. For each type of outlet the standardized form focusing on the technical and administrative procedures will be designed.

D. Follow-up Activities

During the two-week period following the mission, PAHO, AID and the DFH staff will collaborate in the preparation of a new project request (1980 to 1983) for submission to UNFPA. This document is expected to be completed for formal presentation to UNFPA in November. Other MCH/FP activities for which additional donor support is requested should be planned in accordance with the national strategy and should complement those requested in the UNFPA document.

E. Technical and Administrative Support

The international consultants will be contracted by the American Public Health Association, which will have responsibility for travel arrangements and per diem and honorarium payments. These costs, plus a management fee, will be reimbursed in equal proportions by AID and PAHO. The overall direct responsibility for the mission will be shared by the Public Health office of the USAID mission in Haiti and the PAHO/WHO Country Office. Technical backstopping will be provided by the Office of Planning of the DSPP, the Division of Family Hygiene, the AID Office of Population for Latin America (David Denman), the Research and Evaluation Officer of PAHO's Comprehensive Health Services Division (Dr. Gerald Bailey), the PAHO Area II Family Advisor (Dr. German Mora) and the United Nations Fund for Population Activities. UNFPA will host a one-day orientation meeting for the mission team in its New York offices on September 17.

The mission team will travel to Haiti on September 18 and will remain for the following six weeks. Prior to departure a meeting will be held with the DSPP, DFH, PAHO and AID. A one-day briefing session will be held at UNFPA in New York on or about October 12 to conclude the mission.

F. Background Documents

Prior to departure for Haiti, the mission team will receive the following background documents:

- o Consultant Report of Dr. Sam Wishik and Ms. Norine Jewell (January, 1979)
- o Consultant Report of Mr. Joel Montague (February, 1979)
- o AID PP 0087, Haiti, Maternal and Child Health/ Family Planning
- o UNFPA/PAHO MCH/FP Project Document (1976-1977)
- o Report of Ms. Joyce King on Evaluation of the Nutrition Education and Recuperation Centers (1978)
- o Schematic Analysis of the MCH/FP Situation in Haiti (1978)
- o Annual Report of the DFH (1978)
- o Basic Data Sheet (PAHO/Haiti)

Other relevant documents will be available for review by the mission team upon arrival in Haiti.

The team will visit the following hospitals, health centers, clinics, and dispensaries:

o Hospitals, 4:

L'HUEH
Isaie Jeanty
Jeremie
St. Marc

o Health Centers, Out-patient Clinics, Mobile Clinics, 6:

Isaie Jeanty
Jeremie
Gonaives
Hinche
Petit-Goave
Cayes

o Dispensaries and Health Agents:

| | | |
|-------------|------------------|--------------|
| 4 Les Cayes | Charpentier | Replacements |
| | Tiburon | Arniquet |
| | Coteaux | Rendel |
| | St. Louis du Sud | Mexenod |

| | | |
|---------------|----------------|--------------------------|
| 4 Cap-Haitien | Le Borgne | Replacements |
| | Terrier Rouge | Caracol |
| | Dondon | Trou du Nord |
| | Sainte Suzanne | Petite Anse |
| | | Optional: Quartier Morin |

| | | |
|------|-----------|---------------------------|
| ODVA | Chatelain | Replacements |
| | Guiton | Villard |
| | Pelissier | Sacre Coeur de Pont Sonde |
| | La Hatte | Mauger |

o Others, 3:

| | |
|-------------|-------------------------|
| 1 Hinche | Dispensaire la Jeune |
| 1 Belladere | Dispensaire Las Cahobas |
| 1 Jacmel | Dispensaire la Vallee |

Composition of the Team

The team included one Haitian program official and five international consultants contracted by the American Public Health Association (APHA) and jointly financed by AID, UNFPA and PAHO. The members of the team were:

John Kennedy, M.D., M.P.H.

Health Administrator and Child Health Specialist

Susan Klein, M.P.H.

Consultant in Health Systems Management and
Specialist in Health Education and Training

Kirsten Lundeen, R.N., M.S.

Consultant in Maternal/Child Health and Family
Planning and Specialist in Community Health
Nursing

Fanny Rosenzuaig, M.D., M.P.H.

Public Health and Clinical Maternal/Child
Health and Family Planning Specialist; Obste-
trician and Gynecologist

Jacqueline Nowak Smucker, M.S.S.A.

Background in Social Service Administration,
Supervision and Cultural Studies

Adeline Verly, M.D., M.P.H.

Administrator, Maternal/Child Health and Family
Planning Specialist; Obstetrician and Gynecolo-
gist

John Kennedy acted as team leader by organizing the style and form of the evaluation, based on the talents and knowledge of each team member. He also transmitted to other team members the broad dimensions of the national program and its relationships with other activities which influenced the intermediate and local levels. He gained more information and further interpreted certain administrative aspects of the program and problems identified by previous consultants and on-site observers. He served as technical consultant in matters of child health and nutrition and assembled and wrote the evaluation report.

Susan Klein evaluated the degree to which the management systems of the DFH were being used effectively at the operational level. She assessed recordkeeping systems; compilation of service statistics and logistics systems (their use and effect(s) on operations); and fee systems used by the clinics. Ms. Klein also assessed the health education (primarily motivational in nature) undertaken in the clinics and community and investigated the training programs for the nurse auxiliaries and health agents.

Kirsten Lundeen examined the medical norms and practices of the auxiliary and health agent staff and the administrative and supervisory skills of these personnel. She examined clinical operations, in particular, how they facilitated or inhibited the quantity or quality of patient care. She observed how staff were able to identify and resolve MCH/FP health problems of individuals, families, and the community. The criteria used to examine and analyze the service sites included adequacy of physical facility; patient flow; sanitation; clinic policies and procedures; building capacity, equipment, supplies and medication; medical services; patient education; function and practice of personnel (i.e., qualifications, competence, training and supervision).

Fanny Rosenzuaig observed and analyzed the services given to prenatal, postnatal and family planning patients and children by doctors, nurses and auxiliaries--in particular, their appropriateness and thoroughness. Dr. Rosenzuaig placed special emphasis on the quality and quantity of education and information given to the public during vaccination programs, prenatal and under-five consultations, and in family planning group sessions. She was the principal consultant for the analysis of family planning activities in terms of their appropriateness, adequacy and effectiveness.

Jacqueline Nowak Smucker's principal role was to observe and analyze the impact of the clinical operations on the people in terms of their perceptions, motivation, attitudes towards and understanding of the MCH/FP services. Ms. Smucker also examined the attitudes, motivation and communications skills of the clinic staff in their relationships with the people of the community. She analyzed the adequacy of their training and supervision with respect to these factors.

Adeline Verly initially provided the team with a historical perspective on the Haitian MCH/FP program. She clarified and interpreted the team's field observations and served as official protocol host to provinces visited.

During the final phase of the evaluation, Dr. Verly actively shared and analyzed program and field trip data and discussed with the team local political, social and administrative considerations. Dr. Verly's relevant and practical perspective ensured recommendations would be realistic and implementable by the DFH and Department of Health.

The health administrator was based primarily in Port-au-Prince and traveled, to the extent needed, to examine operational procedures and practices as they related to the national MCH/FP system. His analysis focused on the following DFH activities.

- administrative structure and norms;
- supervisory system;
- statistics and evaluation;
- administrative aspects of IEC (information, education and communications) activities;
- logistics and supply system;
- planning capacity; and,
- past and future training activities for administrative personnel at all levels.

The other team members visited a sample of service delivery outlets at all levels (including hospitals, health centers, dispensaries, health agents, mobile units, satellite clinics and nutritional centers) to analyze current activities in terms of quantity and quality and to identify obstacles to the delivery of services. Specifically, the following were examined:

- adequacy and application of technical norms;
- level and appropriateness of technical preparation and in-service training;
- adequacy of supervision as perceived by operational-level staff;
- type and appropriateness of IEC activities; and,
- data collection, processing and utilization at the local level.

The team members visited and observed some of the multisectoral and community approaches to MCH/FP services, including the rural unit system of a community-based program at Leogane, and the commercial distribution of condoms by use of condom machines in Port-au-Prince.

All the members met at regular intervals with the Haitian program personnel in both the DFH and Department of Public Health.

Work Performed and Methodology

The evaluation team decided to assign responsibilities for assessments and analyses as follows:

Strategy and Planning: Dr. Kennedy, assisted by Dr. Verly

Management Systems: Ms. Susan Klein

Operations: Dr. Rosenzuaig, Mrs. Lundeen, and
Mrs. Smucker, assisted by Dr. Verly

In order to visit as many service sites as possible, the team members divided into two groups (excluding Dr. Kennedy and Dr. Verly). Each group was composed of one medically-oriented member and one community health or health management consultant.

Group 1: Susan Klein and Kirsten Lundeen

Group 2: Fanny Rosenzuaig and Jacqueline Smucker

Dr. Kennedy spent one week reviewing activities of the division and related activities at the national level. He made selected site visits in Port-au-Prince, Saint Marc District, Cap-Haitien in the North Region and Les Cayes in the South Region.

Dr. Verly divided her time equally between the two teams, overlapping with Dr. Kennedy at Les Cayes and Saint Marc.

Each group visited the following sites:

Itinerary, Team 1, Klein and Lundeen:

Maternity Isaie Jeanty, PAP in-patient and out-patient clinics; DFH mobile clinics in Port-au-Prince; Gonaives Hospital and health center; Ennery satellite clinic;

Mauger dispensary; ODVA administrative meetings; Desseaux dispensary; Gravey and DuVallon village, with health agent and community council; Gonaives military post; Les Cayes regional health administrator; St. Louis dispensary; Torbeck dispensary; Guilloux village, with health agent; Les Cayes training program for auxiliary and health agents; La Hatte Dufort dispensary (unit system approach and community council); director, Division of Nursing, Port-au-Prince; and Port-au-Prince commercial condom distribution activities.

Itinerary, Team 2, Rosenzuaig and Smucker:

Hospital de L'Universite de L'Etat, Maternity/Pediatric in-patient and MCH/FP health center; St. Marc district hospital and Haute du St. Marc dispensary; Jeremie Hospital complex (in-patient, health center/out-patient clinics); Ravine Blanche, with community agents; L'Ester health center; La Haute mobile/satellite clinic; ODVA administrative meeting; Petite Riviere health center; Cap-Haitien regional office and administrative staff; St. Suzanne dispensary; Quartier Morin model dispensary; Dondon dispensary; and La Hatte Dufort Duplessis (unit system).

Site visits required approximately 13 days in the field. Field trip reports and summaries of major findings and observations were prepared by each member of the team. Using these references, assessment of the current situation and formulation of recommendations were done by group conferences. These conferences were structured as they pertained to the three levels of assessment and analysis: strategy and planning, management systems and operations. Although discussions were, on the whole, led by the team members, who had the principal responsibilities for the level considered, all members of the team participated in the discussions at all levels.

Weekly meetings were held with the staff of the DFH for a total of five sessions; representatives from UNFPA, PAHO and AID were present at two sessions. Three meetings were held with USAID/Haiti; the director of AID was present at two of these meetings. The country representative for UNFPA was present at the final meeting with USAID/Haiti.

One meeting was held with the Director General of Health and all principal officials of the Department of Public Health (including the Minister of Health) were present at a dinner offered on behalf of the team.

On return to the United States, briefings were held with PAHO and AID representatives in Washington, D.C., and with UNFPA representatives in New York.

Documents Reviewed

The following documents were reviewed by the evaluation team during the course of the mission.

Rural Health Delivery System

Haiti Five-Year Plan, Chapter III, Politique de Sante du Departement de la Sante Publique et de la Population, DSPP, 1975.

Project Paper, Haiti Rural Health Delivery Systems, USAID (AID/LAC/p-008, Project No. 521-0091), August 16, 1978.

Evaluation of Strengthening Health Services II (Project 0086) and Recommendations re Implementation of Rural Health Delivery Services (0091), J. S. Prince et al., (AID Contract 521-C-78), April 12, 1979.

Activites de Protection Materno-Infantile et de Planification Familiale--Rapport Semestriel Janvier-Juin, 1979; Maternal/Child Health and Family Planning Activities, Semi-annual Report, January-June, 1979, DFH, September, 1979.

Draft APHA Evaluation Report on Haiti Family Planning Projects 0087 and 0071, Sam Wishik and Noreen Jewell, April 30, 1979.

Maternal and Child Health and Family Planning--Mid-term Project Evaluation, April, 1974/December, 1975, DFH, February, 1976.

Mid-term Project Evaluation, Haiti, Maternal and Child Health and Family Planning, Inter-agency Meeting.

Maternal and Child Health and Family Planning Project Paper, USAID, December, 1974.

Analyse Schematique de la Situation de la Protection Materno-Infantile et de la Planification Familiale en Haiti (Schematic Analysis of the Maternal/Child Health and Family Planning Situation in Haiti), DFH, undated.

Preliminary Report of the Consultant on Health Services Administration and Logistics to the Division of Family Hygiene, Joel Montague, February, 1979.

Request to UNFPA for the National Program of MCH/FP in Haiti: 1300, Division of Family Hygiene, 1978.

Responsibilities of the Division of Family Hygiene in the Joint Health Project of ODVA-DSPP, DFH, 1978.

Rapport Final du Projet Integre de Sante et de Population de Petit-Goave (Final Report of the Integrated Health and Population Project of Petit-Goave), DFH, July, 1979.

Plan and Development of Educational Program for Health and Family Planning Programs, Report of Seminar Sponsored by UNESCO, Cap-Haitien, April 23 - May 4, 1979 (French).

Operations Manuals and Training Curricula

Manuel de Reglements Administratifs (Manual of Administrative Rules), DFH, August, 1975.

Directive Administrative (Administrative Directive), DFH, September, 1979.

Work Manual for MCH and Family Planning, DFH (NORMS), DSPP, February, 1975 (French).

Mobile Clinics, NORMS, Division of Family Hygiene, 1978.

Manual for Supervision of Mobile Clinics, DFH (French).

Description des Fonctions et Activites du Personnel Infirmier en Haiti, L'Infirmiere Diplomee, L'Infirmiere-Auxiliaire Diplomee, L'Agent de Sante, Department de la Sante Publique et de la Population, Division du Nursing, Haiti, May, 1978.

Normes et Standards de Soins Infirmiers en Sorte Communautaire, Bureau National de Nursing, Organisation Panamericaine de la Sante, Organisation Mondiale de la Sante, Division D'Hygiene Publique, Section du Nursing, December, 1978.

Normes et Standards Dans Les Soins Infirmiers pour Les Patients Hospitalises, Bureau du Nursing, Organisation Panamericaine de la Sante, Organisation Mondiale de la Sante, Association Nationale des Infirmieres Licenciees D'Haiti, April, 1976.

Propositions Generales pour le Curriculum des Ecoles des Auxiliaires D'Infirmier de Cap-Haitien et Les Cayes, Spring Conference, 1979.

Programme d'Etudes des Ecoles Nationales D'Auxiliaires (Program of Studies of the National School of Auxiliaries), DFH, March, 1979.

Programme de Formation d'Agents de Sante (Training Program for Health Agents), DSPP, undated.

Guide de Travail pour Les Agents de Sante (Work Guide for Health Agents), DSPP, 1978.

Manuel de L'Agent Communautaire (Community Agents Manual), DFH, August, 1975.

Training Manual for Matrones, DFH (French).

Manual of Norms for Program of Nutrition Intervention, Bureau of Nutrition, July, 1979 (French).

Manuel National de Vaccination (National Vaccination Manual), Dr. Jasmin and Ms. Jannini, DSPP, 1978.

Special Studies

Utilisation de Moyens Folkloriques dans L'Education des Communautes Haitiennes en Planification Familiale (Utilization of Folkloric Methods in the Education of Haitian Communities in Family Planning), DFH, January, 1979.

Analyses and Compilation of Nutrition Data and Studies, Joyce M. King.

Themes of Nutritional Education for Mothers, Bureau of Nutrition, July, 1979 (French).

III. REVIEW OF PAST ACTIVITIES OF THE MCH/FP PROGRAM

III. REVIEW OF PAST ACTIVITIES OF THE MCH/FP PROGRAM

Background

Before discussing the five-year MCH/FP plan and the activities subsequently carried out, some background information on Haiti's socioeconomic situation and on related health problems must be provided.

The Republic of Haiti occupies the western third of the island, once called Hispaniola, which it shares with the Dominican Republic. It comprises 27,750 square kilometers and in 1977, had a population of 4,749,000. Given the annual growth rate of 2.3 percent, the population now probably exceeds 5,000,000, yielding an average population density of approximately 175 inhabitants per square kilometer.

Haiti takes its name from the Arawak word "Hayti," which means "the mountain country." Hispaniola is the most mountainous island in the Caribbean, with Haiti's peaks reaching 9,000 feet. Much of the steep land is accessible only by the network of trails, paths and rough roads which, during the rainy season, are often impassible because the streambeds overflow at depths impossible to traverse even with four-wheel-drive vehicles. Most of the country is accessible only by small horse and donkey--the most common mode of transportation in the rural countryside.

Over the years, most of the forests have been destroyed, and the topography of the country is such that heavy rains and improvident agricultural practices have depleted much of the land. At present, there is only about one-half hectare of tillable soil remaining per inhabitant. The population in 1920 was 2.1 million. Forty years later, in 1960, it had increased to 3.6 million; it now stands at 5.0 million. Given the current net rate of population growth, the population will reach 9.2 million by the year 2000. There is no way the Haitian land mass can support that number of people, even at subsistence level.

Haiti's population is very young, with 41.6 percent less than 14 years old. Only 27 percent of the school-age children attend elementary school, and in rural areas, where 80 percent of the people live, fewer than 10 percent attend school. Haiti's illiteracy rate--76 percent in 1971--is one of the highest in the Americas and has decreased little in the last 10 years.

One of the poorest countries in the Americas, Haiti's per capita annual income equals only 136 United States dollars (1976). In most rural areas it is difficult to earn a dollar a day, and favored nutritious foods--eggs, chicken and meat, for example--are rarely eaten by the farmer's family and instead sold for cash. Approximately 60 percent of Haitian children under five suffer some degree of malnutrition, and an estimated 40 percent have second to third degree protein-caloric malnutrition.

Infant mortality is estimated at 137 per 1,000 live births (IHS, 1973) --the highest in the Americas. Most of these deaths are attributed to tetanus contracted soon after birth (due to umbilical infection); diarrheas often associated with preexisting or subsequent malnutrition; protein-caloric malnutrition; and neglected or untreated respiratory infections.

In 1976 Haiti had a maternal mortality rate of 32 per 10,000 (DFH, 1978). This is three times the rate found in such countries as Paraguay. In 1978, only 17 percent of births occurred in health facilities supported by the government. One can assume that 10 percent of deliveries take place in private hospitals; the remaining 73 percent of women gives birth with the assistance of the traditional midwife (matrone) or is unattended. The very high death rate associated with childbirth is intensified by the high degree of anemia and toxemia found among pregnant women; debility associated with tuberculosis and malaria may also be a contributing factor. An estimated 90,000 to 120,000 Haitians are infected with tuberculosis, and about 4,000 die each year of the disease.

This was the climate under which the five-year MCH/FP program was begun in 1974. The plan of operations for Phase I anticipated extending MCH/FP services, with DFH assistance, to 20 more health units (in addition to the two already established in Port-au-Prince during the pilot project). These included four clinics in the Port-au-Prince/Petionville metropolitan area; two in the Cap-Haitien region; two in the Les Cayes region; three in the Petit-Goave region; and nine in other districts.

These clinics covered the major population centers of each health district and were to serve as bases from which the program could be extended later to rural areas. Although there was some uncertainty as to the number of people served by each clinic, it was estimated that the 20 new clinics would provide services for approximately 550,000. Together with the estimated 100,000 people covered by the original MCH clinics at the University Hospital and Isaie Jeanty, Phase I would provide MCH/FP coverage for approximately 650,000 --mostly in urban and suburban areas, but widely distributed throughout the country.

Division of Family Hygiene (DFH)

The Division of Family Hygiene (DFH) has been the principal activator for MCH/FP services within the Government of Haiti's (GOH) national health system. Historically, it grew out of favorable experiences in the late 1960s at two major state-operated hospital centers in Port-au-Prince: the Maternal and Child Health Center of the university teaching hospital and the Isaie Jeanty maternity unit at Chancerelles (a district of the metropolitan area of Port-au-Prince). The DFH was incorporated into the national health system by the law of August 26, 1971, when it became a division of the Department of

Public Health. The newly legalized DFH was assigned "the supervision and coordination of all the activities, both public and private, concerning maternal and child health, including family planning being carried out in the territory of the Republic of Haiti." Despite this decisive language, the new division's role was mainly that of a staff (normative) organization responsible for performing the following functions:

1. Plan the national program for MCH/FP services.
2. Within this plan, establish norms to permit the effective functioning of MCH/FP services, their coordination, supervision and evaluation.
3. Carry out the training of personnel.
4. Make appropriate operational studies to increase the effectiveness of services.
5. Facilitate the work of the health establishments.

Three aspects of the arrangements under which the Division of Family Hygiene was created should be stressed. They are discussed below:

A. Work with Donor Agencies and Haitian Government

The DFH was created primarily to structure and coordinate the relatively large amounts of money contributed by donor agencies and the activities they undertook. Funds came mostly from population and family planning monies. The main agencies involved were:

- o Agency for International Development (AID), the foreign assistance agency of the United States Department of State.
- o United Nations Fund for Population Activities (UNFPA), whose programs in the Americas are administered through the Pan American Health Organization (PAHO), which is the regional office of the World Health Organization (WHO).
- o Inter-American Development Bank, which provided loans.
- o Pathfinder Fund, Center for Research for International Development (IDRC) and Brot fur die Welt (BFDW), which means Bread for the World.

IDRC is an agent for Canadian foreign assistance, BFDW a German foreign assistance agency. These two agencies collaborated on a special study, "Integrated Project of Health and Population of Petit-Goave," and with Pathfinder Fund, provided small inputs.

The UNFPA has contributed the bulk (about two-thirds) of the financing and most of the in-country technical advisory services through PAHO. AID has contributed nearly all the contraceptive supplies, some of the vehicles, part of the construction funds and a portion of the training costs. Pathfinder is no longer an active participant; the work it undertook at Petit-Goave with IDRC and BFDW has been completed.

Although the GOH is credited with contributing more than half of the costs, its actual contributions--other than those for basic salaries, maintenance of buildings and other fixed costs--depend on the generation of counterpart funds. (The limits of the GOH budget, that portion available for operating expenses for health programs, will be discussed later.) The MCH/FP program is a multi-agency funded activity, and the GOH has been almost solely dependent on external sources for operating costs. The inputs of these varied agencies have not always been well coordinated. Donor agencies, too, have often had differing perceptions of the goals and objectives of the program. This is particularly true of AID and USAID in Haiti, where assistance for population, family planning and other general health activities is funded and monitored in separate projects with different objectives.

B. Structure and Operation

The DFH is a normative division of the Department of Public Health. As such, it is a technical support division that can prescribe standards (norms), establish methodology, conduct applied research and plan and coordinate external assistance. It does not, however, have direct responsibility for executing most of its programs in the field. The DFH does operate certain activities quite directly (e.g., mobile units and condom machine activities in Port-au-Prince), but it must depend on existing health delivery systems to implement the bulk of its regular program.

At the onset of the program (and to this day), the health structures for delivering these services were (and remain) extremely weak; in some areas they are essentially nonexistent. The DFH, in evolving the maternal/child health and family planning program, had to create and fortify the systems at the implementation level--despite any legal responsibility or authority for the direction of these peripheral units.

During the life of the program, the Ministry of Health made a major policy change that decentralized responsibility for the planning and execution of health services. This new system, called "Regionalization," restructures the existing 11 health districts into five regions on a geopolitical basis. According to the plan, each region will have a pyramidal structure, with a regional hospital at the top, district hospitals at the secondary level, health centers (with or without beds) at the third level and satellite dispensaries (four to five) associated with each health center. The dispensaries, in turn, will have four to five health agents who will work at community levels, essentially rendering polyvalent primary health care services, including simple medical care, health education, basic sanitation, family planning and referral services. Only two of the original 11 districts have been designated as regions. They are the North and South regions; now in the initial stages of evolution, neither fits the model regional pattern as described.

Particularly during the last two years, the process of regionalization, with its separate and different system of supply and mode of operation, has created another dimension of the overall problem of a normative division trying to expand its influence and methodology to service units beyond its control. Since most of the districts are in a transitional period, aiming towards integration into a planned region, the patterns of health services and their support vary widely throughout the country. At the national level, the division is destined to become integrated into the Department of Health.

The circumstance surrounding this action is discussed below.

C. Reporting and Execution of Functions

The Division of Family Hygiene is one of several normative (staff-support) organizations that report to and execute their function through the Director General of the Department of Public Health. Among them, four other divisions (or offices) have functions that contribute, to a greater or lesser degree, services related to MCH/FP. They are:

- SNEM (malaria eradication and, to a lesser degree, tuberculosis control;
- Bureau (Office) of Nutrition;
- Division of Nursing and (closely related) Division of Paramedical Training; and,
- Division of Statistics.

Each of these is discussed below.

Service National des Endemies Majeures (SNEM) is a semi-autonomous organization that has been in existence for 15 years and has a staff of 436. It receives its principal external support from AID and PAHO and is run by an executive committee whose members include the directors of PAHO and USAID/Haiti and the Minister of Public Health. The executive committee is responsible for the general execution of SNEM's program. It determines the appropriate measures to be taken; approves the nomination of SNEM's director; approves the personnel system, including recruitment, promotion and dismissal practices; and serves as liaison with other government agencies.

The anti-malaria program began in 1964. After being on the verge of success between 1966 and 1968, the slide positivity rate of malaria climbed from a low of 0.2 percent in 1968 to a high of 15.1 percent in February, 1978. Although vector resistance to DDT has posed increasingly severe technical problems, there have been numerous other coordination and administrative management problems: the piecemeal (monthly) release of GOH funds (which delayed shipments of DDT and increased unit prices); a multiplicity of foreign advisors offering conflicting advice; and poor external donor and internal planning and management coordination.

SNEM has received over 320 vehicles and has the only operational motor vehicle repair shop with trained mechanics. It would undoubtedly be designated the nucleus for the development of a national health vehicular transport service in any plan for integrating Haiti's health program.

The Bureau of Nutrition (BN) parallels the DFH in many of its activities and structure. Since 1965, it has operated as a quasi-independent unit with the prerogatives and status of a "division" rather than a "bureau," due in part to its nearly 100 percent outside donor support. The BN operates 30 nutrition rehabilitation centers and has trained 26 auxiliary nutritionists who work closely with the health staff at district levels and on outreach programs.

The nutrition rehabilitation centers are not related geographically to health institutions but are located mainly on the basis of their usefulness to and appropriateness for nutritional field studies.

Since BN has the major responsibility for research work in nutrition and does nutrition education work with mothers, its activities overlap the child health, growth and feeding aspects of DFH's program. Coordination between the two units has not always been good. The input to BN from foreign sources is not correlated with ongoing programs developed under the aegis of the DFH. The nutrition program of BN has been evaluated recently and, with the assistance of the Center for Disease Control at Atlanta (CDC, United States Public Health Service), BN is currently conducting a nationwide nutrition assessment. The results of this assessment should be available by the end of CY 1979.

The Division of Nursing, Department of Public Health, through its sections of training of nurses and auxiliaries, plays a prominent role in developing the curricula for training courses and training manuals that set standards for training district- and regional-level auxiliaries. The division is responsible for developing the overall structure and content of the training program, but all the training schools are independent of the Division of Nursing. Health agents are trained by the Division of Paramedical Training.

There is also a subsection of nursing in the DFH which has some rather ill-defined responsibilities for the training and utilization of health auxiliaries. Given the diffusion of responsibility in this area, there has been little cohesiveness in the training of health staff needed to carry out the MCH/FP program.

The Division of Statistics, Department of Public Health, collects routine health and service statistics from the various health units throughout the country. The statistics compiled in the field pertaining to MCH/FP activities are channeled through the Section of Research and Evaluation, Division of Family Hygiene, which has two subsections: a unit of statistics and a unit of research. The chief of the Division of Statistics works part time with DFH, and collaboration between the two units is good. There are also professional statisticians assigned to six of the 11 original districts.

The in-country capability for training statisticians is relatively well developed. A two-year postgraduate course in statistical methods is offered at the National Training Center for Statisticians in Port-au-Prince.

The Department of Public Health provides an additional three-month orientation course in health statistics.

Integration of the DFH statistical section into the Department's Division of Statistics would not be difficult and in fact, steps in that direction are already underway.

Development of National MCH/FP Program

The present national program of MCH/FP was developed in three stages, each of which is described below.

A. Pilot Project, March, 1973 to July, 1974

The pilot project was carried out in the Port-au-Prince area at the country's two principal maternity units (previously noted). The project was conducted under an agreement, dated March, 1972, between the Government of

Haiti, the United Nations Fund for Population Activities (UNFPA) and PAHO/WHO. Services did not actually begin until one year later. The general objectives of the pilot project were to:

- develop the necessary infrastructure for the establishment of integrated MCH/FP services within the Department of Public Health and Population; and,
- study the general acceptance of these services by both the health personnel and communities served.

Specified objectives included:

- development of the infrastructure, including the establishment of a Division of Family Hygiene within the Department of Public Health;
- initiation of MCH/FP services at the units noted above;
- development of a program of public information and education through mass media channels and use of community agents;
- development of human resources, that is, in-country training programs for physicians, nurses, auxiliary health workers, administrators, statisticians and the training abroad of certain professional staff members;
- development of a statistical system; and,
- study of the situation of clinics in outlying areas and preparation of a five-year program.

An evaluation of the pilot project was made in March, 1974, by the DFH and PAHO, which drew the overall conclusion that the majority of the objectives set for the project had been accomplished.

B. Phase I, April, 1974 to December, 1975

Phase I was the first part of a national five-year program for MCH/FP which, in turn, was responsive to the broader-based five-year health plan of the Ministry of Public Health.

Relevant portions of the five-year (1975-1980) GOH health plan are included in the appendix. (The writer has underlined certain statements that seem prophetic in view of certain findings in this evaluation which will become apparent later in the report.)

The goals and objectives of the program were set in terms of a five-year period implemented in two phases: a first-phase, April, 1974 to December, 1975, and a second phase, January, 1976 to July, 1979. The goals, objectives and specific targets are summarized below.

1. Long-range Goals

- o To contribute to the decrease of maternal/child mortality and morbidity in the country.
- o To improve the health and well-being of the Haitian family through the provision of MCH/FP services.

2. Intermediate Objectives

o Provision of Services

To expand the maternal and child health and family planning services in both urban and rural areas of Haiti.

At the end of five years, the project should achieve the following targets in the areas covered:

- * Increase prenatal coverage of pregnant women from 10 percent to 75 percent and immunize all pregnant women seen in prenatal care against tetanus (at least two shots per pregnant woman).
- * Increase the utilization of maternity beds from 20 percent to 80 percent of capacity.
- * Improve home delivery facilities and services for approximately 27,000 women per year (13 percent of all deliveries).
- * Provide postpartum and postnatal services to 50 percent of recently delivered women.

- * Increase the percentage of immunized children under five (DPT, BCG, polio) from 10 percent to 80 percent.
- * Provide child health screening services for 80 percent of children under five years of age.
(Note: An important aspect of this screening was the early recognition of malnutrition by the use of age/weight graphs with premarked curves differentiating ranges of normal, first, second and third degree malnutrition, based on ICAP, Nicaraguan standards.)
- * Supply 20 percent of women aged 15-44 with family planning services. It was expected that 10 percent of the acceptors would be male.

o Improvement of Administrative Organization

To strengthen the DFH through development of administrative capacity at all levels.

Specific activities planned during Phase I were:

- * Preparation of a manual of administrative standards and procedures.
- * Establishment of a supply logistics system.
- * Establishment of a planning system with DFH.
- * Coordination of the DFH with the Division for Nutrition, Nursing and Disease Control in the Ministry of Health.

o Development of Human Resources

To design and conduct training courses and seminars aimed at training physicians, community workers, nurses and auxiliaries and instructors to train matrones, and to conduct in-service training for clinic personnel prior to opening new clinics.

Specific activities during Phase I provided training for:

- * 16 physicians and 16 nurses for work in rural areas.
- * 120 community workers for health education and service outreach from base clinics.

- * 12 professional staff at national and regional levels.
 - * 15 matrone instructors.
 - * 30 nurse auxiliaries.
 - * 96 staff members in clinics for in-service training.
 - * 80 physicians and 50 nurses, graduated from the university in 1975 (orientation seminars).
- o Development of Statistics-Evaluation-Research System
- Specific activities during Phase I were:
- * Preparation and publication of a manual of service statistics, standards and procedures.
 - * Establishment of a standardized system for monthly, quarterly and annual reporting.
- o Education and Communications
- Specific activities were:
- * Inform and educate people on MCH/FP by radio (approximately 20 percent of the population has access to radio).
 - * Produce printed matter (posters, brochures, pamphlets, etc.) for the population that can be reached by this means (estimated 9 percent of the population).
 - * Publish written articles on MCH/FP for that proportion of the population that reads newspapers (estimated 1.7 percent of total population).
 - * Give informal educational lectures.
 - * Provide information on clinic hours and services through direct contact by community agents and by use of loudspeakers (16 clinics involved).
 - * Develop the role and work of community agents in promoting use of MCH/FP services.

o Nutrition

Specific objectives were to:

- * Promote nutritional education for mothers attending prenatal clinics.
- * Provide supplementary feeding to 4,000 mothers and 8,000 malnourished children in Port-au-Prince area with foods provided by World Food Program (WFP).
- * Prepare a brochure on nutrition.

o Immunization

During Phase I, specific objectives were to:

- * Immunize 127,500 children aged 0-5 against BCG, DPT and polio. (Approximately one million children were in this age group.)
- * Immunize 40,000 pregnant women against tetanus. (This number represents approximately 18 percent of the total number of pregnant women in the population, which in 1975 was estimated at 221,200.)

C. Phase II, January, 1976 to Present

The second phase of the five-year program began in January, 1976, and has continued to the present. The overall aim was to extend MCH/FP services to rural areas, using 18 clinics established in provincial populous areas as a base. In 1976, four more provincial urban areas were added, bringing the total effective service units to 22. The methods used to extend the program are described below.

1. Extension of services to suburban and semi-rural areas by the use of "satellite" clinics.

A satellite clinic is a type of mobile clinic that visits every month, on schedule, a fixed site (school, building, warehouse, etc), using an ordinary four-wheel-drive vehicle.

The team for a satellite visit usually consists of a doctor (frequently a resident physician), an auxiliary nurse, one or more community agents and usually a nutrition auxiliary trained by Bureau of Nutrition).

The services offered at the satellite clinics are the same as those offered at the fixed clinics: prenatal and postnatal care, health education of the public, child health and growth supervision, immunization, family planning and referral services.

2. Use of mobile clinics, using a special design, sufficient-into-itself mobile unit that visits fixed locations (marketplaces, common meeting areas, etc.) on schedule.

These units are used only in metropolitan areas, Port-au-Prince at present. Two new units are planned for use at Cap-Haitien and Les Cayes.

3. Expansion to rural dispensaries where services are offered by staff of one or more nurse auxiliaries and outreach to the community through health agents.

A particular emphasis was given to a combined DFH/Department of Public Health effort to extend services to the Artibonite Valley, where a large developmental irrigation project had been undertaken.

4. Extension into the medical units of the army (family planning services only).
5. Extension of MCH/FP activities to 26 nutritional recuperative centers (CERNS) operated under the aegis of the Bureau of Nutrition.

The results of efforts to extend program coverage and meet objectives are graphically illustrated in Tables I-V and Trend Graphs I-V, which are taken directly from material prepared by the DFH for submission with its new proposal to UNFPA.

Program progress during the second phase of the program was slow and as the trend curves show, the rate at which services were extended dropped sharply (compared with earlier progress made during Phase I). Members of the division tend to explain this on the basis of decreased incentives offered to clinic staff when supplementary salaries were decreased for those staff members working on MCH/FP activities in the afternoon following a Department of Health policy decision to spread the supplements among all staff in the clinics. The evaluation team believes that the extension of the

T A B L E I

PROGRAM POPULATION
AS PERCENT OF TOTAL POPULATION
1974-1978

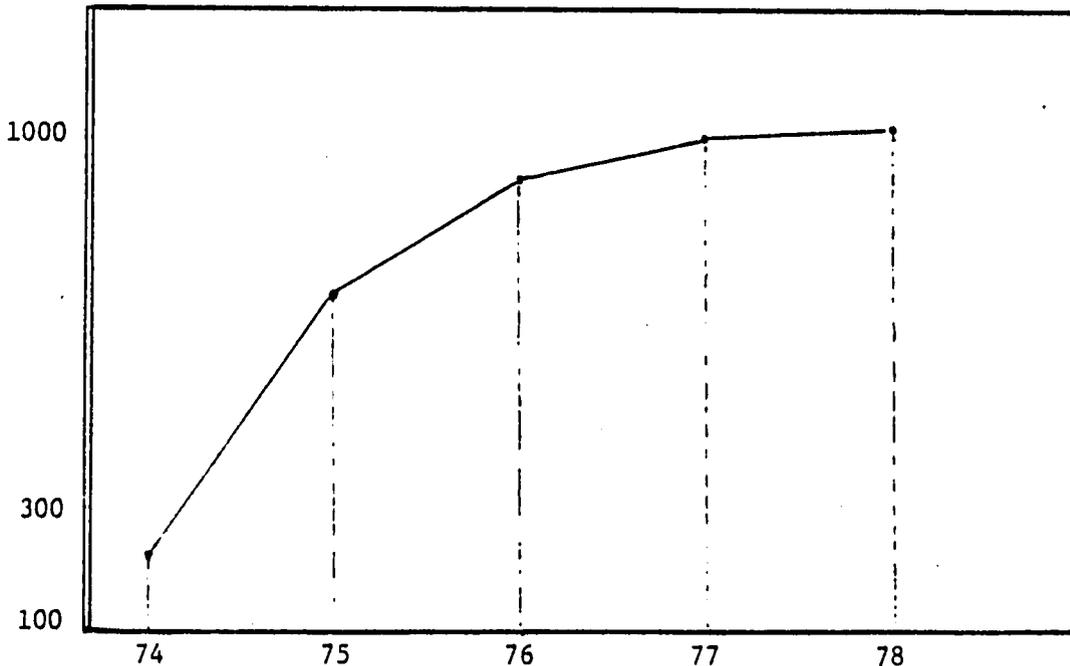
| Population Program Area | | Percent of Total Population |
|-------------------------|---------------|--------------------------------|
| | (In Thousand) | |
| 1974* | 150 | 3.3% |
| 1975** | 550 | 12.0% |
| 1976*** | 950 | 20.4% |
| 1977 | 1095 | 23.1% |
| 1978 | 1145 | 23.7% |

* Population covered by 4 clinics; from these, 2 were based in Maternity Services.

** Population covered by 18 clinics; from these, 13 were based in Maternity Services.

*** 22 clinics; from these, 14 based in Maternity Services.

TREND OF THE POPULATION PROGRAM AREA
1974-1978



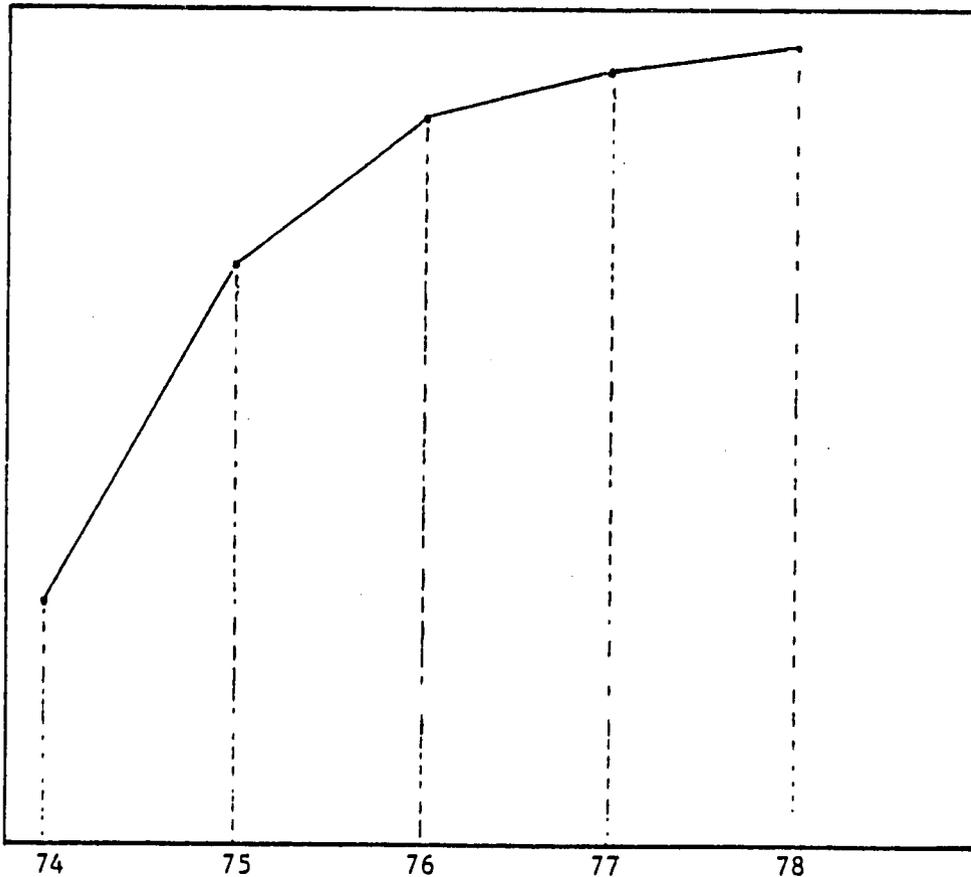
T A B L E II

PRE-NATAL CLINICS ACHIEVEMENTS
PERCENT OF TOTAL PREGNANT WOMEN
1974-1978

| YEAR | PRE-NATAL CLINICS ACHIEVEMENTS | PERCENT OF TOTAL PREGNANT WOMEN |
|------|--------------------------------|---------------------------------|
| 1974 | 3251 | 1.8% |
| 1975 | 16322 | 8.9% |
| 1976 | 34565 | 18.5% |
| 1977 | 43130 | 23.6% |
| 1978 | 49442 | 30.7% |

Pregnant women account for 4% of the total population or 20% of women fertile age (15-44), who represent 20% of the total population. The objective in Pre-natal was to cover 75% of the pregnant women in the program area. This objective has never changed during the past five years of the program; but by increasing the population area every year, an increase in the coverage of the pregnant women was achieved.

TREND OF PRE-NATAL CLINICS ACHIEVEMENTS



T A B L E I I I

HOSPITAL DELIVERIES ACHIEVEMENTS
AS PERCENT OF TOTAL DELIVERIES
1974-1978

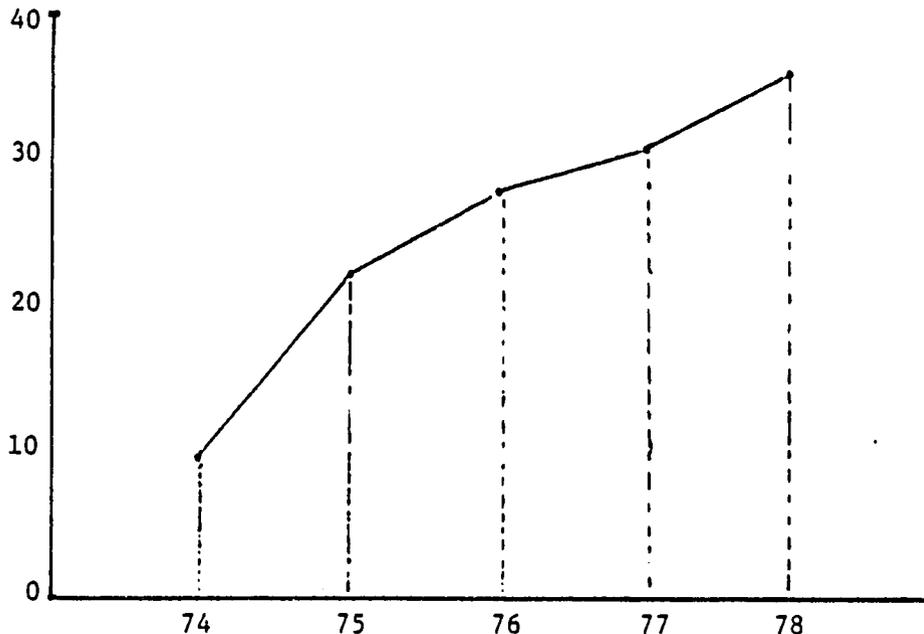
| YEAR | HOSPITAL DELIVERIES | PERCENT OF TOTAL DELIVERIES |
|------|---------------------|-----------------------------|
| 1974 | 9480 | 6.0% |
| 1975 | 21841 | 13.0% |
| 1976 | 27236 | 16.0% |
| 1977 | 30499 | 17.0% |
| 1978 | 35712 | 20.0% |

The objective during the five-year program was to increase the rate of bed-occupancy to 80%.

Total numbers of expected deliveries are obtained by applying to the population the crude-births rate for 1974 and 1975 for the other years (data from the Haitian Institute of Statistics).

From 1974 to 1975, there was a rapid increase in accordance with a great increase in the number of maternity services supervised by the program: from 2 to 13.

TREND OF THE HOSPITAL DELIVERIES
1974-1978



T A B L E I V

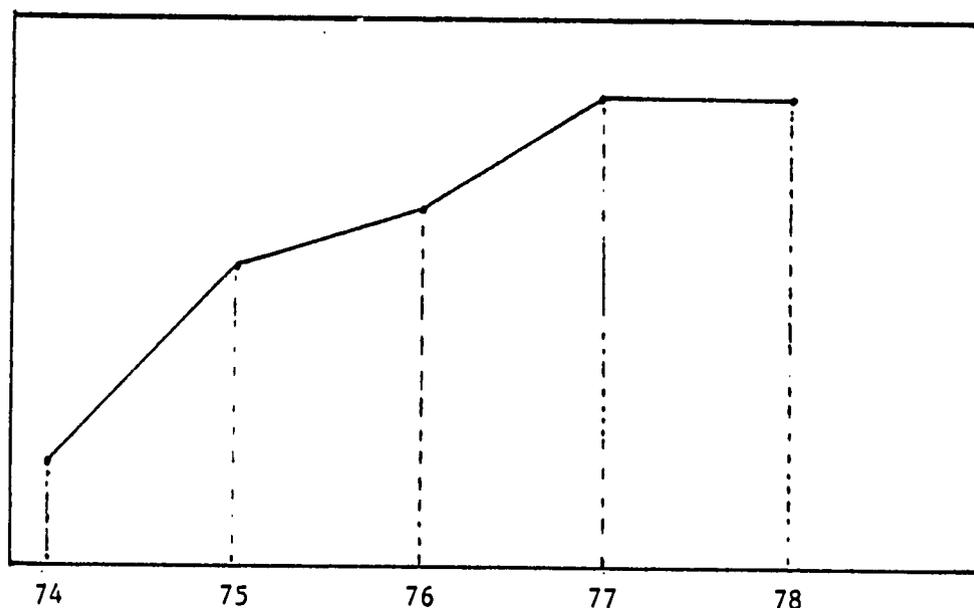
CHILD SCREENING ACHIEVEMENTS
AS PERCENT OF TOTAL CHILDREN

1974-1978

| | CHILD SCREENING ACHIEVEMENTS | PERCENT OF TOTAL CHILDREN |
|------|---------------------------------|------------------------------|
| 1974 | 16347 | 1.4% |
| 1975 | 43109 | 4.7% |
| 1976 | 57215 | 6.1% |
| 1977 | 100433 | 10.6% |
| 1978 | 90868 | 9.4% |

The objective was to screen 80% of the children (0-5 years) in the area of the program. The rapid numerical increase in 1977 is probably associated with the expansion of the program through the satellite and mobile clinics.

1974-1978
TREND OF THE CHILD ACHIEVEMENTS



T A B L E V

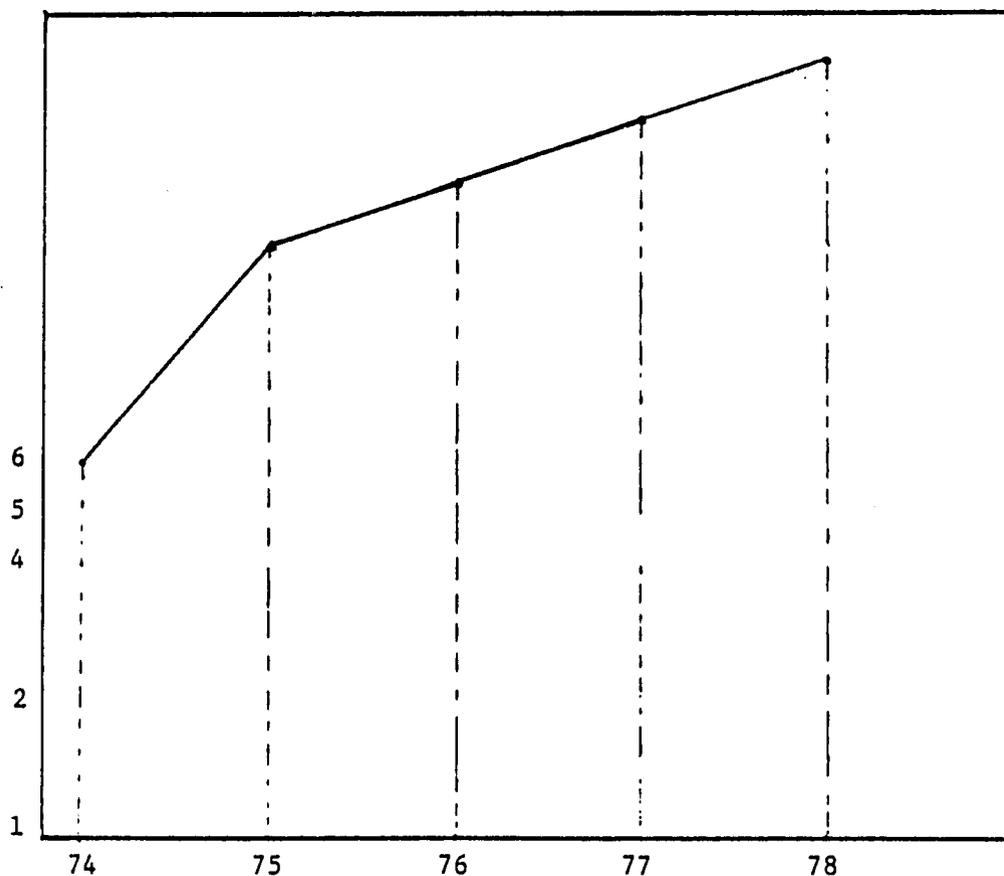
MALE AND FEMALE NEW ACCEPTORS
ACTIVE FEMALE ACCEPTORS AS PERCENT OF FERTILE FEMALES

1974-1978

| | MALE NEW ACCEPTORS | FEMALE NEW ACCEPTORS | TOTAL ACTIVE FEMALE ACCEPTORS | PERCENT OF FERTILE WOMEN |
|------|-----------------------|-------------------------|----------------------------------|-----------------------------|
| 1974 | .767 | 5022 | 6417 | .7% |
| 1975 | 9654 | 15563 | 18280 | 2.0% |
| 1976 | 26982 | 16066 | 25877 | 2.7% |
| 1977 | 38282 | 20059 | 34079 | 3.5% |
| 1978 | 42932 | 22848 | 46458 | 4.8% |

TREND OF THE TOTAL ACTIVE FEMALE ACCEPTORS

1974-1978



program to rural areas during Phase II is an equally important consideration. The original methodology used during Phase I was based on experience in the urban areas. Application of a similar method to rural areas and supplementation with mobile clinics met with less success than anticipated. A different type of approach was probably needed for these outreach programs. Lack of a proper community approach and poor preparation were probably dominant factors in the lack of success experienced among the rural populations. The evaluation team also found evidence of improper training and supervision of auxiliaries and health agents and serious defects in the supply administrative support mechanisms at district levels.

Undoubtedly, the intrinsic problems of difficult access and communication to the more remote areas exacerbated operational problems and substantially reduced and rate of progress.

Evaluation

In February, 1976, a mid-term evaluation of the program for MCH/FM was made. The resulting conclusions and recommendations are outlined in the chart which follows.*

* Extracted from report on the evaluation.

SUMMARY OF FINDINGS AND RECOMMENDATIONS
 Mid-Term Project Evaluation
 April, 1974 to December, 1975

| <u>Area</u> | <u>Constraints</u> | <u>Recommendations</u> |
|--------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Planning and Programming | Lack of accurate baseline demographic data | Use official data of Haitian Institute of Statistics as principal source |
| | Insufficient knowledge of program targets at all levels | Use simple program guidelines and orient clinic, district and regional staff |
| Administrative Services | Too centralized | Decentralize administrative control, particularly over salary payment, personnel management and vehicle control |
| | Inadequate preparation and knowledge of administrative staff of administrative norms | Administrative supervision needs strengthening; train more district and regional administrative staff |
| | Gaps in supply-inventory systems | Needs improvement and more attention |
| Delivery of Services | Incomplete integration of all MCH/FP services at clinic and district levels | Strengthen integration and improve quality of services, particularly prenatal and delivery services |
| | Poor physical facilities (inadequate finances) | Secure appropriate financial provision (local and external) to improve structure |

| <u>Area</u> | <u>Constraints</u> | <u>Recommendations</u> |
|-----------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Insufficient follow-up activity | Provide continuous training for clinic staff; increase number of supervisory visits; provide more and better training for matrones |
| | Need to expand community-based services to reach more people in rural areas | Improve coordination with other community services (e.g., nutrition, agriculture, community development) |
| Training of Personnel | Need to reinforce, particularly in areas of administrative and statistical procedures and programming | Strengthen training activities in each of these areas |
| | Course content and application need to be more practical particularly for clinic staff | Emphasize practical aspects and increase length of training if necessary |
| | Evaluation of training lacking | Provide more in-service training and make more supervisory visits; evaluate training activities emphasizing detection of future training needs; use expertise of other sections of Ministry of Health (e.g., nursing, nutrition, etc.); develop plans for improved basic curricula of various categories of personnel in collaboration with persons responsible for training (e.g., schools of nursing, midwifery, medicine, auxiliaries, etc.) |

| <u>Area</u> | <u>Constraints</u> | <u>Recommendations</u> |
|----------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Education and Communications | Insufficient active involvement of community and community leaders | Set up community committees; expand community-based programs |
| | Baseline information on community attitudes, beliefs and behavior lacking | Make selected sociological studies pertinent to needs |
| | Insufficient careful monitoring of work of community agents | Conduct study of selected sample of community agents assessing their effectiveness and recommending ways to strengthen them |
| Statistics, Evaluation and Research | Part of research studies of little value | Select more carefully research topics emphasizing practical value (should have three-year plan) |
| | Inadequate training and supervision of statistical personnel at clinic level | Continue and improve training of statistical personnel in clinics and districts |
| | Need to simplify statistics system with view to improving use in programming and decision making | Review statistical system and make periodic analysis of <u>all</u> program activities and use this information in on-going program improvement effort |
| Financial Resources and Materials | Need to improve coordination external donor agencies | Hold interagency meeting to determine future program needs; assure adequate financial support for next three to five years |

AreaConstraintsRecommendations

| | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Hold semiannual interagency meetings to review program progress |
| | Inadequate GOH resources for gradual assumption of local costs in near future | Continue discussions with GOH to encourage GOH's gradual assumption of larger share of local costs |
| | Need to improve delivery of program supplies and materials | Monitor request and delivery of supplies and equipment; meeting quarterly with executing agencies |
| General Coordination | Lack of knowledge and understanding of DFH program in other units of Ministry of Health and in other ministries | DFH should prepare small bulletin on program and distribute semiannual newsletter or bulletin of information to other governmental agencies and departments |
| | Need to improve coordination with in DFH and among agencies | Hold periodic meetings with Ministry of Health staff; monthly meetings of chiefs of all sections of DFH for program review; quarterly meeting of participating agency representatives to exchange information and resolve problems; semiannual meetings with agency representatives; make annual project review |
| Integration of Program | Need to develop strategy for integrating all DFH activities into Ministry of Health | Continue discussions with Ministry of Health officials and develop plan for integrating DFH program into MCH within next three years |

IV. ASSESSMENT OF THE CURRENT SITUATION

IV. ASSESSMENT OF THE CURRENT SITUATION

Strategy Planning Level

A. General Considerations

Many of the health problems found in mothers and children are only symptomatic of the more general problems associated with a highly underdeveloped country that has a static if not deteriorating economy, a depletion of land resources, an uneducated people (particularly the rural majority) and an expanding population with critical man-to-land pressures. These critical factors (which are beyond the scope of this evaluation), if not addressed, could turn a bad situation into a national catastrophe in terms of human suffering and actual survival.

MCH/FP services in Haiti, developed under the aegis of this program, constitute (with the exceptions of malaria control, 30 nutrition recuperation centers and medical care, which is too frequently inaccessible) the only services available to 80 percent of the Haitians who live in rural areas. In an impoverished country, mothers and children are the groups most vulnerable to ill-health, suffering and excessive early-life deaths. The health statistics previously cited emphasize this point. There can be little doubt that Haiti's Ministry of Health assigned high priority to these problems in its five-year health plan (1975-1980). (See Appendix for extracted portions.)

In the opinion of the evaluation team, it is not a moot question whether one should concentrate efforts mainly on measures aimed directly at checking the rate of population expansion or on providing services for mothers and children, including population and family planning services within the clinical-oriented health system. Obviously, certain types of family planning activities can be (and are being) undertaken outside the health delivery system. Nevertheless, the need for services for mothers and children is critical, and Haiti's MCH/FP program is the only mechanism developed in response to this need. Obviously, both types of services and both approaches must be used.

The problem, as the evaluation team sees it, is that the MCH/FP program has been supported almost entirely by money earmarked for population and family planning, financed mainly through UNFPA and the Population Office of AID, based in Washington, D. C. Understandably, these agencies, in order to justify their contributions, have expected tangible short-term results in terms of the extension of family planning activities and evidence of impact on birth rates and, hence, population control. In recent years, both those who appropriate Population/FP funds, and the donor agencies who program these approaches, moving away from the vertical type of Population/FP towards one of more integrated services. It appears to this evaluation team that the time has come when the MCH/FP program in Haiti needs a less restrictive, broader funding base. Discussions on the point should be more forthright than they have been in the past.

B. The GOH Health Budget: Allocation of Funds
and Effects on Services

In 1978, the Department of Health and Population had a nondevelopmental budget of approximately 8.4 million United States dollars. That is, about \$1.70 per capita. The Government of Haiti's total nondevelopmental budget for the same year was 77.5 million United States dollars. The health budget, therefore, was about 11 percent of the total GOH budget--a relatively high proportion when compared with other underdeveloped countries' budgets. With the many other pressing needs, it is difficult to urge a commitment of a higher proportion of the GOH budget to health services. If fixed costs (e.g., expenditures) for salaries, utilities, building maintenance and central administration are excluded, only about \$4.6 million annually--about \$0.92 per capita--remains of the health budget for other operating costs, including vaccines, expendable medical-related supplies and equipment.

In 1978, approximately one-half (\$2.2 million) of this available operating budget was spent for health services in Port-au-Prince, which has less than one-fifth of the country's population. This represents about \$3.36 per capita expenditures in the capital area, compared with an average of only \$0.50 in other areas; this may be as low as \$0.10 per capita in remote areas such as Hinche.

The evaluation team found a great variability in the amounts and variety of medicines, supplies and equipment in different areas of the country. The lack of medical supplies was most apparent in those districts that depend largely on the Department of Public Health supply channels. This was true, for example, in the Artibonite Valley (Saint Marc District), where the Department of Public Health has a joint project in community health with the ODVA. It was also true in Jeremie, which is remote (although included in the South Region) and receives relatively little support, despite a comparatively high demand for services. However, medical installations in the integrated new regions of the North and South are quite well stocked, because they receive supplies from UNICEF through the WHO project to strengthen local health services. Similarly, the 22 urban and semi-urban health units developed during Phase I of the MCH/FP program are relatively well-supplied with items relating to services for pregnant mothers (with notable exceptions discussed later) but have few materials related to child health. All units have an abundant supply of pills, condoms and IUDs because of large inputs of these items from AID.

The overall picture in rural and provincial areas substantiates the fact that the provisions of medical and health-related supplies and equipment is largely dependent on the types and quantities of supplies furnished by foreign donor agencies. Areas that fall outside of foreign-assisted programs and that must be supplied solely by the Department of Public Health are undersupported and often neglected outright.

C. Foreign Assistance Past and Future

During the fifteen-year period 1963 to 1978, the international agencies--UNFPA, PAHO, IDB, WFP and UNICEF--together contributed over 50 million United States dollars to Haiti's health programs. Roughly half of this, \$24.5 million, came from AID; the rest from the United Nations agencies, including a \$9 million soft loan from the International Development Bank. A large share of this went to creating a health infrastructure and to malaria control. The MCH/FP program was a late starter in the competition for foreign aid because pilot studies for this program did not begin until 1974. During the last five years, total foreign assistance to MCH/FP has been about \$6.5 million, with the bulk (about \$5 million) provided by UNFPA and other United Nations agencies. AID's contribution has been relatively small, averaging about \$250,000 per year for a total of about \$1 million. The remainder has come from other agencies, as noted. On balance, the foreign inputs into MCH/FP have been small in comparison with the large inputs that have gone into other health programs. During the next four years (CY 1980 through CY 1983), the anticipated needs of foreign assistance for the MCH/FP program is about \$6.5 million from UNFPA and an additional \$1 million from AID, making an estimated total of \$7.5 million. By comparison, USAID/Haiti for these years has programmed 33 million United States dollars (\$17 million in grant funds and \$16 million in anticipated local counterpart funds generated from the sale of United States "excess" foods under PL 480) for the development of the health delivery system.

In additional \$6.4 million loan for this purpose has been approved by the Inter-American Development Bank. WHO and UNICEF are currently contributing over \$1 million a year in technical advisory services, training funds and supplies for improving health services. The combined total anticipated foreign donor inputs for the extension of the general health delivery system is, therefore, about 10.5 million United States dollars per year, or a total of \$42 million over the next four years.

If one adds the \$7.5 million requested for the MCH/FP program, the total availability of foreign assistance funds for health systems and MCH/FP programs combined will be about \$50 million during the period CY 1980 through CY 1983. Together with \$8 million per year provided in the GOH appropriated budget, this still represent a total of over \$80 million for four years, or \$20 million per year, which is a total availability of about four United States dollars per capita for the delivery of local health services through government health services.

D. Coordination: Past and Present Problems

Previous evaluations have pointed out the many coordination problems that have existed in the MCH/FP program since its onset. In the section "Review of Past Activities of the MCH/FP Program," allusion to these

problems was made and some of the circumstances creating and perpetuating them suggested. The deficiencies noted in the mid-term evaluation of 1976 with respect to lack of general coordination and insufficient knowledge and understanding of the program, both within the Ministry of Health and among the donor agencies, persist and perhaps are more apparent now than they were in 1976. Since the methodology used by the present evaluation team permitted team members to collectively observe a representative sample of health activities performed at different levels of implementation, a more comprehensive appreciation of the extent of this general problem emerged.

One potential problem is related to the large now rural health delivery system project developing with AID assistance. Although this project plans for a country-wide program of integrated essential health services, only marginal attention has been given to the existing network of MCH/FP services developed under the DFH program. DFH staff are understandably concerned about the future role of and support for the national program of MCH/FP which, during the past five years, has had a well-deserved high priority. The Director General of the Department of Public Health said that a meeting was scheduled in the near future to discuss coordination between the two programs.

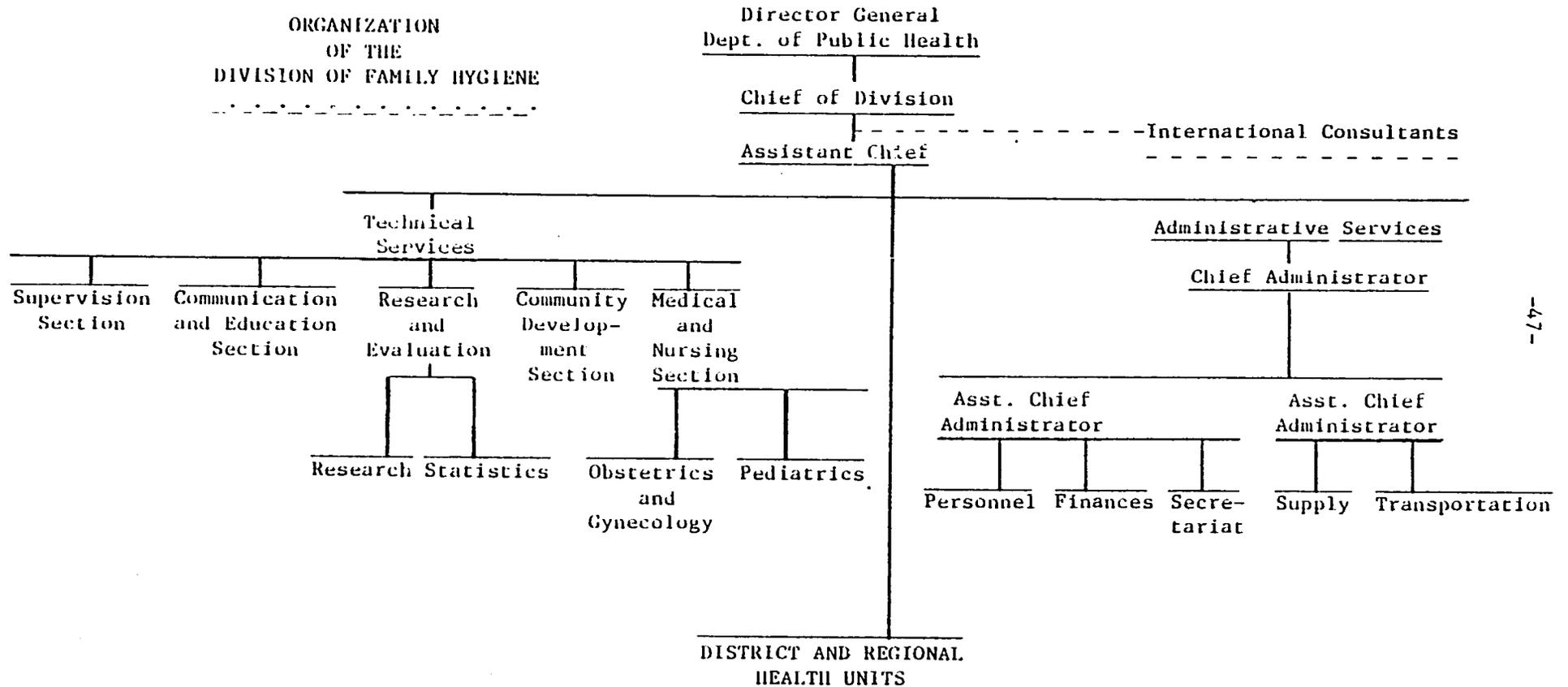
It was apparent that no specific plan had yet evolved concerning the manner in which the MCH/FP program would be integrated with general health services, except for the general concepts set forth on regionalization, which in essence would decentralize responsibility for and authority over the regions as they are formed; and DFH would become subsequently a purely normative division.

Within the Department of Public Health, the responsibilities of the Bureau of Nutrition, Division of Planning and Division of Nursing and Paramedical Training and the ways in which staff support functions of these divisions (or offices) relate to similar activities carried out within the DFH are ill-defined. This situation has resulted in inadequate and improper training of service delivery personnel, fragmented services, particularly in child care and nutritional promotion and corrective services, ineffective public education activities and lack of clarity and effectiveness in the chain of supervision. The lack of coordination planning between the Division of Planning and the Division of Family Hygiene has produced a general lack of uniformity in the methods, administrative procedures and comprehensiveness of health services in different parts of the country and a fragmented supply system with serious gaps in the provision of essential supplies and equipment in many areas.

E. Division of Family Hygiene: Its Organization, Strengths and Weaknesses

The DFH, as noted above, is a normative division within the Department of Public Health and Population. Its organization reflects these functions and is structured as illustrated in the organogram that follows. It

ORGANIZATION
OF THE
DIVISION OF FAMILY HYGIENE



has a central staff of 88, including four doctors and seven nurses. The doctors include the director, assistant director and two of the six chiefs of the sections under technical services. One additional physician position as chief of the subsection for obstetrics and gynecology was vacant at the time of the team's visit. The seven nurses, although they are assigned to the medical and nursing section (except for two nursing specialists in maternity and pediatric services), spend most of their time providing services using the mobile unit in Port-au-Prince or making field visits within teams operated under the supervision section. A brief analysis of the division, by functional section, follows.

1. Administrative Services

a. General

Under an administrative directive issued in September, 1979, by Mr. Bogard Marseille, the administrator of DFH, two assistant administrators were designated: Mr. Ernest Lubin and Mr. Sylvio Albert. A senior assistant administrator, Mr. Lubin has responsibility for personnel, finances, building maintenance and repair and the correspondence and other work of the secretariat. The senior assistant administrator also serves as acting administrator when the latter is absent. Mr. Albert, as junior assistant administrator, has responsibility for transportation and supply.

Administrator Marseille left on a year-long study tour in the United States (University of Connecticut at Hartford) soon after the team arrived in Haiti. During his absence, Mr. Lubin will serve as acting administrator. In addition to his regular duties as senior assistant administrator, Mr. Lubin will, during the next year, be responsible for planning, coordinating and supervising the work carried out under the administrative services section.

These functions are numerous and diverse. They include:

- budgeting and planning;
- reporting, reviewing and controlling expenditures, including signing all checks;
- hiring and disciplining employees;
- controlling payrolls;
- authorizing leaves;
- supervising building maintenance and arrangements for new building construction;

- coordinating with administrative units within and outside the government;
- supervising secretaries;
- controlling all division correspondence; and,
- assuming responsibility for numerous tasks concerning personnel matters with the division and in the districts.

Mr. Lubin is also responsible for helping the field service units develop their administrative capabilities. This is an area that needs much more attention since the administrative staff at regional and district levels were incompletely trained at the onset of the program, and there are priority needs for training additional administrative staff for field units, as well as for refresher and supplemental training of existing staff. With the pressure of every-day duties related to the central DFH office, it is unlikely that either Mr. Lubin or Mr. Albert will have much time to devote to these normative functions or to forward planning.

PAHO/Haiti has assigned an international consultant to work with the administrative section of DFH during the next two years. Even with this additional help, it is unlikely that much can be done to strengthen the administrative and managerial capability of the peripheral units during Mr. Marseille's year-long absence.

b. Supply

Physical facilities at the central level of DFH include a medical storeroom, three warehouses and a cold-storage room for vaccines. These facilities are described below.

The storeroom for drugs and miscellaneous expendable medical supplies is small (approximately 250 square feet), reasonably clean and orderly. It is located in a wing of the central office building of DFH. Shelf storage is arranged by functional grouping with stock numbers. Security seems to be good and entrance is restricted to supply staff only. There has been a history of minor theft, but apparently this has not been a major problem.

The variety of drugs is limited, consisting principally of aspirin, piperazine (anti-worm medicine), pitocin and ergotrate (for obstetrical deliveries), anti-cough medicine, antiseptic (for deliveries), magnesium sulfate (for toxemia of pregnancy), silver nitrate (for ocular instillation of newborns) and a limited quantity of oralyte for oral rehydration (diarrhea).

According to Mr. Albert and his supply staff, the current limited supply of drugs reflects a policy decision made in 1976, thus reduced medical supplies are offered to maternity and pediatric services. Family planning

supplies, including pills, IUDs, condoms and foam, are in abundant supply. These are provided by AID, but AID does not furnish medications other than contraceptives to the program.

The three bulk warehouses are all within the compound of the Department of Health garage. UNFPA-furnished equipment and expendable supplies are stored in two adjacent warehouses, each providing about 800 square feet of storage space. The bulk of these supplies consists of such items as matrone kits; nurses' bags; IV solution (saline in water--1/6 molalactate and 5 percent glucose in saline) with disposable plastic recipient sets enclosed with each unit; cotton, gauze dressing, surgical pads; plastic bowls; maternity instrument trays; and a limited amount of oral contraceptives (including Eugrynon 21 and Neogynon 21), IUDs and Emko Foam with applicators. The type and variety of equipment reflect the program emphasis on maternity services and family planning. There is also a small supply of nonmedical items, such as bicycle tires, portable file cabinets, small generators (power sources for movie projectors), loudspeakers and other health education and mass communications items.

Nearly all items are stocked in their original packing crates. The warehouses are nearly full of the above items and others associated with maternity and family planning services. Although like items are sorted and stored separately, it is difficult to assess readily the quantities of the items. Given space and arrangement limitations, it is also very difficult to assimilate readily newly arriving items and to maintain storage and issue on a "first-in/first-out" basis. Since most of the items are nonperishable and generally stored near the entrance, this may not be a critical problem. However, the general appearance is that of a relatively dead-storage operation. The buildings, though, are tight and the doors strong and well-secured.

The AID warehouse, located a short distance away on the same lot, is similar, of tight construction and with no apparent leaks. The metal doors are well secured with heavy-duty locks. The warehouse is nearly full of contraceptive materials, including large stocks of condoms and oral contraceptives and a plentiful stock of IUDs. Other items are intravenous fluids, sutures and needles. Essentially, the bulk storage reflects the programmatic emphasis on contraceptives and family planning supplies. These would appear to be ample, and are probably excessive; other consultants have stressed the apparent oversupply of contraceptives. The storage arrangements are reasonably good, with aisle access to stacked items. The area is clean, except at one end where debris (concrete and mortar) left by the installation of an exhaust fan fell on top of stored supplies. This appeared to have happened recently and was noted immediately by Mr. Albert. It did not seem to be the result of negligent housekeeping.

Coldroom for vaccines is a walk-in type coldroom, located at the central office building of DFH immediately adjacent to the medical supply room. There is a thermometer on the exterior wall with readings of interior temperature indicated in both centigrade and Fahrenheit scales. Although the administrative consultant forgot to look at the thermometer before entering the cold chamber, the temperature after exiting was three degrees centigrade

(about 35 degrees Fahrenheit), which is well within the range for proper storage of vaccines in this coldroom. (For BCG, the most fragile of vaccines, the proper range is two degrees centigrade to nine degrees centigrade (32 degrees to 49 degrees Fahrenheit.) Polio (Sabin) vaccine, which must be kept at 20 degrees Fahrenheit and has the shortest expiration date, is not stored in this coldroom but stored and supervised directly by Dr. Jasmin, chief of the medical and nursing section.

The coldroom contained the following vaccines:

- diphtheria;
- tetanus and pertussis (in large quantity for preschool children);
- tetanus toxoid (mainly for pregnant women; in large quantity);
- BCG (for newborns, infants and preschool children; in large quantity); and,
- typhoid-paratyphoid (limited quantity; not included in regular DFH program and in small demand).

These vaccines are provided by UNFPA, except for polio vaccine, which is furnished by OXFAM (England).

Cartoons of vaccines are marked with numbers (1, 2, 3, etc.) in accordance with the vaccines' expiration dates; this assures that vaccines with early expiration dates are used first. For example, for DPT, vaccine cartoons marked "1" showed an expiration date of August, 1980; those marked "2" an expiration date of October, 1980. The supply staff seemed well indoctrinated with the vital requirements for proper storage and issue of vaccines.

Safeguards against temperature and power failures include the twice-daily recording of temperature readings; automatic switch-on of a standby 12.5-kilowatt generator in case of power failure; night and weekend guard systems; and backup supervision by Dr. Jasmin, who has a deep interest in and commitment to the immunization program.

c. Recordkeeping

A quick but sufficiently adequate check was made on the Kardex File to determine whether information on the reception and issue of drugs and other supplies was recorded faithfully. Staff were well indoctrinated

in use of the system and recordings seemed complete and adequate. No attempt was made to reconcile the Kardex File with actual item counts. The record system seemed to be adequately organized and supervised.

d. Price Comparisons

The prices of locally furnished common drug items were compared with those of items furnished by a foreign donor (landed price). Such comparisons can provide useful information and may lead to the purchase of more locally available items, thus replacing the cumbersome off-shore procurement of supplies. A comparison of the prices of aspirin and piperazine, both locally produced, indicated that in 1977, when such local purchases were last made, local purchase prices were approximately the same as the landed costs of the items when procured off shore. Purchases were made at the wholesale rate and the close correlation of costs may have been artificial due to prior knowledge of the upper price ranges for UNFPA-provided items. Nevertheless, for common item purchases, it may be preferable to buy those produced locally. The cost of imported drugs not produced in Haiti will, of course, be substantially higher than the landed cost of items provided by a foreign donor.

e. Summary

The supply system is more or less adequate at the present functioning level but it could not handle effectively a suddenly increased load. The types and quantities of drugs and supplies reflect donor agency priorities and external policy constraints, which are not responsive to the needs or desires of the nationals. Other than vaccines, pediatric supplies are very limited and insufficient to satisfy program needs and objectives. There is a notable lack of such medical items as iron and folic acid (for pregnant women) and multi-vitamins. Among other omitted items may be simple laboratory equipment and reagents (e.g., dipsticks for urine sugar and albumin testing).

2. Transportation

a. Numbers, Assignment, Sources and Condition
of Vehicles

As of the date of visit, there were 18 vehicles assigned to activities at the level of the central office of DFH and 19 assigned to service units at field stations, for a total of 37 vehicles. (See the table that follows for characteristics, locations, etc.)

ASSIGNMENT OF VEHICLES BY LOCATION AND TYPES OF ACTIVITIES

DIVISION OF FAMILY HYGIENE
(As of Sept., 1979)

| Central Office | | | | | FIELD STATIONS | | | |
|----------------|-----------------|----------------|---------------------------|-----------------------|-----------------|----------------|---------------------------|-----------------------|
| No | Registration No | Make | Service to which assigned | Monthly Alloc. of Gas | Registration No | Make | Service to which assigned | Monthly Alloc. of Gas |
| 1 | OI-2099 | Jeep Cherokee | 1979 Direction | 40 | OI-1451 | Jeep Commander | 1973 Pet.-Vil. | 40 |
| 2 | OI-468 | Ford Bronco | 1977 Direction | 40 | OI-1453 | Jeep Wagoneer | 1974 Jérémie | 40 |
| 3 | OI-469 | Ford Bronco | 1977 Adm. Courier | 40 | OI-1459 | Jeep Wagonner | 1975 Port-de-P | 40 |
| 4 | OI-470 | Chev. (Blazer) | 1977 Health Educat. | 80 | OI-1461 | Jeep Wagonner | 1975 St. Marc | 40 |
| 5 | OI-450 | Jeep Wagoneer | 1975 Health Educat. | 50 | OI-1462 | Jeep Wagonner | 1975 Cap-Hait. | Unknown |
| 6 | OI-463 | Jeep Wagoneer | 1975 Medical Sec. | 50 | OI-2103 | Jeep Cherokee | 1979 Cayes | Unknown |
| 7 | OI-456 | Jeep CJ 5 | 1974 Stat. Research | 50 | OI-1466 | Jeep Wagoneer | 1975 Gd. Goave | 60 |
| 8 | OI-1455 | Jeep Universal | 1973 Supply | 60 | OI-1467 | Jeep Wagoneer | 1975 Meyer | 60 |
| 9 | SG-21866 | Jeep Cherokee | 1979 Administration | 40 | OI-1471 | Jeep Cherokee | 1978 Pt. Goave | 40 |
| 10 | SG-21618 | Jeep Cherokee | 1979 Supervision | 200 | OI-1472 | Jeep Cherokee | 1978 Gonaives | 40 |
| 11 | SG-21867 | Jeep Cherokee | 1979 Com. Develop. | 100 | OI-1473 | Jeep Cherokee | 1978 Cayes | Unknown |
| 12 | SG-21512 | Jeep Cherokee | 1978 H. Dist. of Cont. | 80 | OI-1474 | Jeep CJ 5 | 1978 Belladere | 40 |
| 13 | SG-21619 | Jeep Truck | 1979 Supply | 60 | OI-2100 | Jeep Cherokee | 1979 Jacmel | 60 |
| 14 | SG-21710 | Volkswagen | 1975 Mobile Unit | 60 | OI-2101 | Jeep Cherokee | 1979 Hinche | 60 |
| 15 | SG-21467 | Jeep Pick-Up | 1979 Mobile Unit | 60 | OI-2102 | Jeep Cherokee | 1979 Cap-Hait. | 100 |
| 15 | SG-21467 | Jeep Pick-Up | 1979 Mobile Unit | 60 | SG-20711 | Jeep Wagoneer | 1975 Cx-des-B. | Unknown |
| 16 | SG-21896 | Susuki | 1979 Condom Machine | 80 | SG-21153 | Jeep Cherokee | 1978 ODVA | 40 |
| 17 | SG-21868 | Jeep Wagoneer | Dispatched for Misc. | | SG-21154 | Jeep Cherokee | 1978 ODVA | 140 |
| 18 | SG- ? | | Dispatched for Misc. | | SG-21620 | Jeep Cherokee | 1979 Cx-des-B. | Unknown |

Comments: Vehicle #18 is newly arrived and not yet registered
Vehicle # 7 was sold (not repairable) during time of visit per author. of PAHO - letter seen.

Comments: Vehicle #2 at Jérémie broken down beyond repair
Vehicle #3 at Port-de-Paix deadlined for repairs.

NOTE: OI = from UNFPA
SG = from AID

Of the 37 vehicles, three are broken down beyond repair: the 1974 Jeep CJ 5, assigned to the statistical research section at the central division level, and the two used at the field stations, the 1974 Jeep Wagoneer at Jeremie and the 1975 Jeep Wagoneer at Port-de-Paix.

At the present time, the effective vehicle fleet numbers 35, of which 10 are at least four years old. Of these 35, 20 were provided by United Nations agencies (UNFPA) and 15 by AID. Most are Jeep brands.

The large Rural Health Delivery System Project (521-0091) of AID/Haiti plans to provide more than 100 vehicles to the health delivery system over a four-year period, beginning in 1979. AID approved a waiver to allow the standardization of vehicles, limiting them to Jeep brand, to facilitate the stocking of spare parts, maintenance and repair. Vehicles coming from other sources are also to be standardized (i.e., of Jeep brand). Of the 119 vehicles at SNEM (Malaria Control), 100 are Jeeps.

b. Cost of Gas

The average expenditure for gasoline in 1978 was approximately \$600 per vehicle. At the price of approximately \$1.50 per gallon, this represents a consumption of 400 gallons per vehicle per year. Consumption costs appear reasonable and vehicle control good at the level of the central office of DFH. Vehicles are secured at night and over the weekend. Driver training has not been given enough attention, nor has safe driving and control of excessive speeding, dangerous passing, etc.

c. Repair Costs

The expenses for vehicle repairs are listed below, by quarters. Figures are for 1978.

| | |
|--------------------|-----------------|
| January - March | 77,833 Gourdes* |
| April - June | 71,561 |
| July - September | 59,563 |
| October - December | <u>84,924</u> |
| TOTAL, 1978 | 293,881 Gourdes |

$$\frac{293,881}{35} = \frac{8,400}{5} = \$1,680^{**}$$

* One gourde = \$0.20 United States

** Total spent, 1978 divided by average number of vehicles

The average annual expenditure for repairs in 1978 was \$1,680 per vehicle. Voucher files for vehicle repairs were examined for August, 1978, to the present. Records showed that the highest cost was for spare parts. Labor costs did not appear to be high. Most repairs were done at two garages: the M. Doublette Garage, which (per the records) sends a list of spare parts and a breakdown of prices (a facture), and the Garage Auto SA, which has not been forwarding factures with itemized spare parts replaced. For example, the record of repair for vehicle number 01-1451, Willys Commander, for July 25, 1975, shows \$131.27 for "spare parts" for tuneup and "service complet," wash, grease and muffler change. No list of parts was furnished.

3. Personnel

As of June, 1979, a total of 913 people was working in the program. The figures were cited in the DFH monthly report. The distribution of staff is illustrated in the table that follows. A relatively small number of nurses and administrators work in the program. The lack of trained nurses is not critical since much of the work to provide preventive services in the MCH/FP program is done by auxiliaries. The scarcity of administrators is critical, however, because training and performance have not been very good.

4. Supervision

The supervision section consists of two doctors, both recently assigned to central headquarters after working in the field. The section has a well-designed set of norms, describing in detail the types of supervisory visits, the principles and methodology to be used, the responsibilities for supervision at different levels and the system for follow-up reporting. Also available are standards and procedures for activities for the mobile team; family planning program for the army; activities carried out in the out-patient departments of district and regional hospitals; and supervision of family planning services, etc.

Supervisory visits from the central office to the regions or districts are of two types: general or routine (twice a year per clinic) and specific or selective (at least once a year per clinic).

The duration of a supervisory visit may vary but usually a general visit is scheduled for four days and a selective visit for two days. Schedules for such visits are posted on the DFH bulletin board for six months and are planned well in advance. The composition of the supervisory team varies with the type of visit planned. The supervision section draws on the personnel from other DEH sections in making up the teams. These usually include a member from the supervisory section, another from the medical nursing section and, frequently, others from the communications and education and research and evaluation sections. Sometimes a storekeeper or administrator is included.

DISTRIBUTION OF STAFF
MCH/FP Program, June, 1979

| UNIT | TOTALS | DOCTORS ¹ | NURSES ² | AUXILIARIES | ADMINISTRATORS ³ | OTHERS |
|----------------------------------------|--------|----------------------|---------------------|-------------|-----------------------------|--------|
| Central Office DFH | 88 | 7 | 7 | 4 | 12 | 58 |
| Metropolitan Area Port-au-Prince | 206 | 40 | 25 | 45 | 10 | 86 |
| Petit-Goave | 97 | 10 | 7 | 17 | 6 | 57 |
| North Region | 119 | 14 | 6 | 60 | 12 | 27 |
| South Region | 112 | 8 | 9 | 57 | 4 | 34 |
| Saint Marc | 58 | 5 | 2 | 26 | 2 | 23 |
| Gonaives | 38 | 5 | 4 | 13 | 2 | 14 |
| Hinche | 50 | 6 | 3 | 15 | 2 | 24 |
| Jacmel | 36 | 4 | 4 | 11 | 2 | 15 |
| Port de Paix | 33 | 5 | 1 | 9 | 2 | 16 |
| Jeremie | 43 | 4 | 2 | 12 | 2 | 23 |
| Belladere | 33 | 3 | 0 | 6 | 2 | 22 |
| Totals | 913 | 111 | 70 | 275 | 58 | 399 |

N.B. Also: 147 community agents and their supervisors; and 265 health agents.

¹Doctors: Include physician directors and assistant directors.

²Nurses: Include fully qualified graduate nurses only.

³Administrators: Include administrators, assistant administrators, bureau chiefs, chief of depots, supply administrators and accounting personnel.

The responsibility for supervising health units below district or regional levels is assigned to the medical director of the district or region and his staff. The written standards are quite specific and detail the requirements for supervisory visits to the periphery. Neither the chain of supervision within a district or region nor the description of each supervisor's responsibilities is defined clearly in the norms. Presumably, district and regional directors are given wide latitude in structuring systems for supervising the units under their jurisdiction.

This appears to be the weakness in the supervision system. The responsibility of the DFH stops at the district or regional level, except for special activities that include the work of community agents and mobile teams. The regular MCH/FP activities at health centers, dispensaries and in the communities where health agents work are essentially beyond the sphere of DFH influence. Yet, it is precisely at these peripheral levels that most of the contacts with the 80 percent rural majority are made. Although the two doctors in the section are new at the division level, both have had intensive experiences at the operational level in successful programs. Their new insights should help improve supervision at the periphery.

The supervision section is also responsible for coordinating the special DFH programs, including the MCH/FP activities in the army program, the factory outreach program and the condom machines. Each program is designed to increase recruitment to family planning. The army program is well established and appears to be operating well. The condom machine program is described in the section entitled "Program Operations." In 1978, 130 machines were placed in Port-au-Prince and 47,544 condoms sold.

The factory outreach program began this year and its progress to date has not been encouraging. During the first phase, 167 factories were identified in the metropolitan and urban areas as suitable for extension of family planning services to employees at their work sites. A few were contacted and family planning technical assistance was offered by the division. To date, only six of these factories have instituted a program and three others have indicated an interest in starting a program in the future. The problems with this program include:

- o Factory owners, although interested in limiting pregnancies among their female workers (this to avoid having to grant pregnancy leave as required by law), have not offered much cooperation in allowing employees to receive education and/or services during working hours. Also, they claim that the program poses problems in enforcing security within the factory grounds.
- o Employees in factories often are paid on the basis of piece work. Time taken to get family planning education or services results in down-time and loss of wages.

- o Doctors and nurses usually are employed on a part-time basis by factories. They may come to the factory clinic for one hour a day or a few times a week. Their attendance tends to be irregular and they do not want to devote time to family planning services for which they ordinarily receive no additional pay.

Despite the constraints, the division is still trying to extend the factory program.

5. Education and Communications

The section involved in education and communication has the following functions:

- o to educate the public in matters concerning maternal and child health, including family planning.
- o To design and conduct training programs and seminars for the medical staff of the Department of Public Health and for community leaders, army personnel, teachers and others.
- o To develop and monitor the work of the 147 community agents and their supervisors who serve as community activators for MCH/FP services in urban and semi-urban areas.
- o To design and conduct studies of the population's beliefs, knowledge and attitudes concerning MCH/FP and evaluation of impact of education programs aimed at gaining better community understanding, cooperation and participation in MCH/FP programs.
- o To edit and publish all principal reports and other documents for the DFH.

The section uses 16 radio stations that have widespread coverage throughout the country. It has made a series of 10-minute color, creole-speaking, 16mm films which are shown locally. Recently, it has been conducting television sessions. Its direct contact with the people in urban areas is made through a network of 109 community health agents.

The section has designed, organized and conducted an average of one training/teaching seminar per month mainly for district and regional health staff. In addition, it has prepared and distributed tens of thousands of pamphlets and posters on MCH/FP topics; for example, encouragement of continued breast feeding; need to immunize children; family planning recruitment; importance of good nutrition; immunization of pregnant women.

The evaluation team believes this section has been assigned too heavy a workload, which has resulted in lack of time (and insufficient personnel) to evaluate the impact of the educational efforts. Field observations revealed that inadequate and sometimes inaccurate health information and public information activities were being undertaken in several areas. For example, people were confused about proper child feeding, particularly about which locally grown foods should be fed to babies.

Although most people valued "shots," they often did not know what specific protection was being acquired. Also, rural women did not understand the various methods of contraception, and some had fears of cancer from the pill. Health workers, particularly those working closest to the community level, had incomplete knowledge and understanding of the services they were administering. This was true about the recognition of nutrition and about proper early-life child feeding. At least part of the problem is that the educational programs disseminated by the division through its section of education and communications do not reach the rural illiterate majority. Face-to-face communication under the section, public education/promotion activities, has been carried out mainly by community agents who work in urban or semi-urban areas. The auxiliaries and health agents who work closer to rural communities have had less training in and are less concerned with communicating and explaining program activities to people.

6. Research and Evaluation

This section comprises two sections: statistics and research. The chief of the section is a well-qualified statistician. A position for a second professional statistician has been approved but not yet filled. The section works closely with the division of statistics in the Department of Health, and they collaborate in the collection and compilation of health statistics. The chief of the department's division of statistics works part time in the statistical section of DFH. Professionally trained statisticians are now stationed in six of the original 11 districts.

The section has a well-designed statistical manual and, on the whole, the manual is followed faithfully. The quality of statistical compilation and analysis is quite high. It also seems that the statistical section, in collaboration with the Department of Health, has done a good job of training and indoctrinating district-level statisticians.

Research work in the section largely depends on the interest and funding of outside organizations. Such research is usually done under the supervision and management of foreign research associates, in collaboration with

members of the section or special research assistants. The section and, hence, the division do not have the resources (manpower and money) to undertake systematically operational research without this outside assistance.

In the past, some of the research studies, stemming from special outside interests, have not been very relevant to the purposes and objectives of the MCH/FP program. Recent studies, such as the Integrated Health and Population Project of Petit-Goave, the Haitian fertility study (part of the World Fertility Survey) and the household distribution of contraceptives study, are providing much useful information for program guidance, but each was initiated in response to interests outside the division.

Evaluation of the ongoing program is largely based on analysis of routinely collected service statistics (e.g., numbers of prenatal visits, immunizations against tetanus, new acceptors for family planning, children weighed, etc.).

These are all based on either activities of fixed clinics or mobiles, and it is difficult to determine the true population covered. It is even more difficult to evaluate the program's real progress in terms of the ultimate purposes of the program, such as percent of newborns protected against tetanus; improvement in the risk factor of childbirth; amount of malnutrition prevented or ameliorated in under-five children; reduction in number of births per unit of fertile women; etc. It was the evaluation team's impression that this preoccupation with recording, tabulating and analyzing clinic-based events tends to obscure the true purposes of the program. Little time and few resources are left to evaluate the quality of services and their effects on the health and well-being of the people. Perhaps a more comprehensive, in-depth focus on the effects of the program in certain indicator zones with well-defined population bases would produce more valid information on overall progress and more useful information for forward planning.

7. Medicine and Nursing

The principal functions of this section are:

- o To work with the medical clinics to improve in-patient and out-patient care and prevention services for mothers and children.
- o To expand the practice of family planning.
- o To participate with the Division of Nursing of the Department of Health in the training of medical and paramedical personnel.

- o To staff and monitor the services provided by the mobile clinic in Port-au-Prince.
- o To organize and monitor the immunization program.

The section is headed by a physician pediatrician. The position of obstetrician/gynecologist and technical director for family planning programs was vacant following the departure of Dr. Lespinasse a few months before. The section also has a head of nursing training, a midwife/nurse, a nurse in charge of matrone training and family planning and a pediatrics nurse, in addition to auxiliaries for mobile clinic work.

The personnel are all well trained and appeared well motivated. A suitable obstetrician/gynecologist has been recruited to fill the position vacated by Dr. Lespinasse and the DFH anticipates improved direction in the field of family planning. The lack of suitable medicines (iron, folic acid, multi-vitamins) for under-five children and pregnant mothers has been discouraging for members of this section. Because of the fragmentation of responsibilities for training paramedical and auxiliary staff, the effectiveness of the training components of this section has been limited, and this has produced some frustration among staff. The evaluation team believes this section can be more useful if staff are given more clearly defined responsibilities and authority in their respective professional fields.

8. Community Development

This newly created section consists of only one specialist in community development who is very well trained, highly motivated and well suited to his assignment.

The function of this section is to develop the community-based programs that have emerged as a newer approach with the DFH. The chief activity at present is the development and extension of the rural health unit. The concept of this new community-based approach is summarized below.

- o Rural units are formed with a population based on approximately 1,000 people (200 families).
- o The program is organized through the community council and with the participation of the people.

- o After a preparatory phase of three months, a reconnaissance and census report is made by trained volunteers, identifying the "population at risk" in terms of the MCH/FP program. The population includes women in the fertile age group, 15-44; children under five; and males in the fertile age group. Other ecological and health-related data are collected at the same time (e.g., presence of wells, latrines, etc.). The services are carried out under the general auspices of the president of the community council.

The actual execution of the work is coordinated and directed by the "promoteur" who is chosen by the DFH with the participation of the administrator of the health district, the coordinators of the national office for community development and the president of the Federation of Community Councils. This person must have attended secondary school to the third level.

The unit of 1,000 people (200 households) is subdivided into two subunits of 500 people (100 households) and a voluntary "collaborateur" is chosen by the community council. This volunteer conducts the work of the subunit and is aided by eight assistant collaborateurs of his own choice.

The collaborateur, with the help of his assistants, performs the following duties:

- o Works under the direction of the promoteur and the president of the community council and keeps the members of the council informed about all the services of the program.
- o Distributes contraceptives and their refurnishing.
- o Establishes and maintains liaison between the technicians of the DFH, the community council and other groups in the community.
- o Recruits clients for family planning services.
- o Maintains permanent contact with the promoteur of the zone.
- o Identifies false rumors about the service.
- o Refers clients who have symptoms or complications with contraceptive methods to health centers or dispensaries.
- o Prepares a map of the unit showing location of houses, wells, schools, dispensaries, etc. The houses are indicated by their SNEM (malaria control) numbers.

- o Takes a census of the families in his subunit.
- o Submits a monthly report.

Although the rural unit system was developed as a method of recruiting family planning acceptors, it can be modified and elaborated into a full MCH/FP community program with primary care dispensary services, a nutrition recuperation center (or foyer), an elementary school, prenatal and postpartum services for mothers, and an under-five clinic.

The evaluation team witnessed the organization of such a rural unit in Leogane commune. The unit system offers an approach to a community-based program for primary health care with integrated MCH/FP services. Where feasible, it may provide the linkages needed to make MCH/FP services more responsive to people's needs.

Since the population coverage is based on a house-to-house census with identification of the specific program target populations and MCH/FP activities recorded in family house records, it also provides an accurate way to continuously measure results and effects of the program. The main limitation of the methodology is that many communities do not have an active community council or other ready mechanism for organizing the community. Much of the success of the program depends on the zeal and interest of the promoteur and voluntary collaborateur.

9. Overview

In general, the DFH has a well-trained and well-motivated staff. Its effectiveness will continue to be limited by the limited number of administrators and the large amount of administrative staff time required to implement the routine administration of the central headquarters of the division. This problem may be partially alleviated but not fully solved by assigning a full-time PAHO advisor. The critical need is to train and retrain district-level administrative staff.

There are also serious defects in the systems developed for supervision and public education. The section of communication and education has too heavy a burden and part of its work (perhaps the monitoring of community agents and publication of division reports) should be reallocated. Supervisory visits must probe deeper into the periphery and put greater emphasis on assessing the quality, as well as quantity, of services. Similarly, the section of research and evaluation should develop techniques to evaluate the impact of the program and go beyond the routine analysis of service statistics. The section also needs funds and resources to implement operational research based on program needs and to become more independent of research that stems from outside interests and support. The division as a unit would profit by more joint efforts in evaluating the program as a whole and its ultimate effects in terms of goals and purposes.

Management Level

In the opinion of the evaluation team, the management systems of the Division of Family Hygiene are not functioning effectively because of the overall management structure of the DSPP. The division must rely on the support of or coordination with other divisions and bureaus; many of the district administrators lack the management skills to implement the systems and programs of the division.

A. Financial Systems

1. Salaries

The salary system for the MCH/FP has a stormy history. When MCH/FP activities were first added to the services offered at the health centers and dispensaries, they were not integrated. Traditional services of the health centers and dispensaries were offered in the morning, as usual, while the MCH/FP services were offered in the afternoon. To compensate the MCH/FP personnel for their extra work, they were paid a salary supplement.

More recently, the services have been integrated and all are now provided in the morning. The salary supplement previously given to a small number of MCH/FP personnel was divided among a larger number of MCH/FP staff. This created resentment among those MCH/FP staff who essentially received a salary cut. It was then that family planning statistics began to show a decline in services. It was hypothesized that the decline was due to lack of motivation among staff who experienced the cut. However, it was not possible to determine exactly whether or not this was the cause of the decline or whether it was due to some other defect.

The most recent salary modification was put into effect on October 1, 1979, by the DSPP. Under the new system, all personnel working in clinics in rural areas will receive salary supplements.

2. Patient Fees

It is division policy that services be provided free of charge. Policy clearly states that no charge is to be exacted for family planning services, but the districts and regions are permitted to charge, if they so choose, for prenatal visits and child immunizations--services provided by the DSPP even before the division's current program began. Because of the division's preference for free services, it has not developed a uniform fee schedule nor a cash control system.

B. Logistics Systems

1. Vehicles

The system for deploying and controlling division vehicles is described in the administrative manual and appears to be sound. Although procedures and controls are executed faithfully at the DFH national level, they are seldom adhered to by field units.

2. Contraceptives, Medications and Supplies

The division has developed a simple, workable requisition system for the medications and supplies it provides. The system includes an internal requisition that enables clinics to order from the districts and hospital services to order from the hospital's central supplies. A second requisition form enables hospitals and districts to order supplies from the division, usually every six months. Stock cards from the division enable hospitals and district/regional warehouses to keep track of supplies on hand. Monthly reports to the division indicate the supply movement during a particular month. The entire system is well documented in the administrative manual.

Contraceptives are supposed to be disbursed through the same system as other division supplies. However, the division's warehouses are filled to overflowing with contraceptives. Consequently, these are shipped to the districts and regions with more warehouse space.

Most other medications and supplies used by the clinics are supposed to be furnished by the DSPP. These supplies are distributed monthly, not by requisition but according to what the DSPP has available.

The North and South regions have a contract with UNICEF to provide them with their drugs and supplies. Although shipments are designated specifically for the regions, they must pass through the DSPP central stores before being forwarded.

3. Equipment

The equipment most frequently found lacking at the health units are scales for weighing adults and children; blood pressure cuffs; laboratory test kits (dipsticks) for urinary sugar and albumin; and refrigerators. Many of the kerosene refrigerators are broken; a good system for their repair or replacement has not yet been established.

4. Field Communications

No uniform system for field communications exists. The methods by which supplies are distributed to dispensaries, health agents and peripheral personnel and by which pay is distributed and reports submitted are left to the discretion of individual district/regional administrations.

C. Information Systems

1. Patient Records and Recordkeeping

The division has developed a set of three patient records for fixed clinics and three patient registers for mobile clinics. The set includes records for prenatal, pediatric and family planning services. The division has not developed protocols for completing the record forms or for filing records. This is left to the districts and regions, which usually leave it to the individual facilities.

2. Service Statistics

Clinics are required to compile both daily and monthly statistics and submit them to the division. The division uses three different sets of data forms: one for hospital clinics, one for dispensaries and health centers, and one for mobile clinics. The division compiles semester and annual reports from the monthly reports.

Operational Level

A. Overview

One of the strengths of the MCH/FP program is the existence of a health care infrastructure that is beginning to extend into the more remote areas of the country. The system has many faults, however. Neither the quantity nor the quality of services is up to expectations. The supply of equipment and medications is grossly inadequate in most facilities. Past training, particularly of the auxiliaries and health agents, has been faulty and supervision in many areas is nonexistent.

While the Division of Family Hygiene has developed excellent normative standards, these are not being maintained at most installations. Health education of the public is usually sketchy and, in some respects, inaccurate or inappropriate.

Until some of the major deficiencies in the current service delivery are corrected, it will be unwise to extend the program into new areas. This will involve training and development of district-level administrative staff, strengthening of the logistical support system and overall retraining of current staff.

B. Supervision at Dispensary and Community Levels

The greatest weakness in supervision occurs at the level of the dispensary, where the auxiliary neither receives nor gives much supervision. The auxiliary, too, lacks supervisory skills. The principal reasons for this seem to be:

- lack of official definition and sanction of the supervisory role;
- infrequent and inadequate contact with the immediate medical and nursing supervisor, especially during the auxiliary's first critical year of work in the field;
- insufficient and ineffective knowledge and skills gained during participation in preparatory education program;
- lack of periodic in-service training;
- unplanned and unproductive monthly supervisory meetings; and,
- minimum working knowledge of the department's normative standards and unclear perception of the goals and purposes of the service program.

The dispensary auxiliary is responsible for the day-to-day operation of the clinic and for the supervision of the work of matrones and health agents in her area. Actually, very little real supervision takes place.

The auxiliary rarely critiques the work of health agents or provides direction and guidance. For the most part, the auxiliary merely adds missing information needed for the record that the health agent has forgotten. Moreover, the organization of supervision at this level does not facilitate

the process. Occasionally, one auxiliary is designated the supervisor of the health agent; more often, the auxiliaries share or rotate these supervisory responsibilities on an informal basis. This practice results in a lack of continuity of supervision. The supervising auxiliary rarely schedules regular monthly meetings with the health agents.

Just how supervision was supposed to be provided to matrones was not clear to the evaluation team. As a minimum, the auxiliary provides some guidance and supervision when the matrones come to the dispensary to pick up supplies. However, in practice, contacts with the matrones are infrequent and auxiliaries provide little guidance.

In many areas, logistical problems make proper supervision difficult. In one case, the health agents worked in villages that were a two- to three-hour walk from the dispensary. Many of the auxiliaries expressed the need for some form of transportation--a bicycle, motorcycle or donkey--to enable them to get to the villages more frequently and more easily.

The auxiliary is supposed to receive guidance and supervision during her monthly resupply visits to the regional or district hospital. In practice, little real supervision is given.

C. Supervision at Higher Levels

Currently, the district or region has the responsibility for supervising all the facilities within its jurisdiction. The method of supervision is left to the individual district or region's discretion. The supervisory guidelines prepared by the DFH stipulate that each dispensary is to receive at least one routine supervisory visit and one or more selective visits per year. In practice, the system varies from place to place.

The South Region has a well-defined supervisory system. Periodic supervisory visits are made by a team consisting of a physician, a nurse or auxiliary, a statistician and a member of the administrative staff. Supervisory visits ordinarily last two days, and all aspects of the clinical operation are observed and rated. There is a standard checklist used in performing these supervisory visits and a report of findings and required actions is promptly returned to the clinic visited. Subsequent selective visits focus on the areas previously found deficient. It is the evaluation team's opinion that the South Region's supervisory system should be studied and a similar system adopted by other regions and districts.

Logistics

A. Vehicles

While the management control system for vehicles as described in the DFH administrative manual is complete and clear, it is not used in the

districts and regions. Trip logs (carnet de bord) seem to be the only control mechanism in evidence. In one district, the log was kept current, but there were serious inconsistencies in the mileage recorded for successive trips between the same two points, indicating that some trips were probably lumped with others. In another district it was reported that no log was received and therefore no record of trips kept, although the vehicle had been on site for two months. In another district no gas log for any vehicle was maintained.

The system for repairing vehicles does not work very well for vehicles based at district or regional levels. Procedures require that vehicles be sent to Port-au-Prince, an obvious impasse when the vehicle is inoperable. In some cases a mechanic is sent from Port-au-Prince with a spare part to make the vehicle temporarily transportable. However, the process is slow and several trips may be needed. In one notable case, a vehicle was out of service for two years. First the part was sent, then a mechanic dispatched. Finally, the vehicle was shipped to Port-au-Prince by boat, and there declared unrepairable and sold for salvage.

B. Supplies

The logistics system for supplies received from the DFH is working well for facilities located in Port-au-Prince and district and regional offices. However, the deletion of antibiotics, multi-vitamins and iron and folic acid from the division's 1976 drug list seriously limited the comprehensiveness of child care and prenatal services. For the drugs available, however, the requisition system is well understood and is well implemented. The bureau managers report that their orders are almost always filled as requested and turnaround time is minimal. Stockroom staff at the DFH level, however, reported that districts are often improvident in ordering their supplies, frequently running out completely before requisitioning needed amounts.

In contrast to the relative efficiency of the DFH supply system, the provision of medicines and medical supplies furnished by the Department of Public Health is seriously inadequate. This situation was particularly true in the ODVA dispensaries in Saint Marc District. It does not seem true, however, in the newly organized North and South regions, where there are adequate supplies because of UNICEF program assistance. It appears that the medical supply division of the Department of Health simply does not have sufficient essential drugs and supplies to respond to the districts' needs. It ships whatever is available, and this is usually very little.

Consequently, district facilities are perennially without essential drugs and supplies. The population served cannot differentiate between supplies furnished by the DFH and supplies provided (more accurately, not provided) by the department. They see the dispensary or other health facility as a place to go when they are sick. When they seek care and do not receive it, they become angry with the staff, lose confidence in the services and stop using the facility. Consequently, the preventive services offered by the DFH lose their credibility and their clients.

Similarly, the supply system between the districts and the dispensaries does not work well. The onus of replenishing supplies to the dispensary rests with the auxiliary, who must go to the district center each month for this purpose.

During periods of heavy rains, this is very difficult. Also, the auxiliaries in some areas are unfamiliar with the requisition procedures and the types of drugs and supplies available. In one dispensary where there were no oraltes, the auxiliary had forgotten that it was on the division-supplied list of drugs.

One of the biggest casualties of the failure to provide drugs and supplies to the periphery is the health agent program. The health agents receive their initial six months of supplies from the DFH. After six months resupply depends on the department's supply system. The restocking seldom occurs and the health agents find themselves in a community where they have built up confidence and expectation unable to continue responding to the people's needs.

Again this is not a general problem in the regions where UNICEF provides support. The evaluation team did feel, however, that the original list of essential drugs (23 items) was unnecessarily extensive for simple on-the-scene primary medical care. It would be preferable to have a short list of 13 or 14 items that can be dependably stocked and resupplied without failures in the provision-reprovision chain.

Equipment

The equipment essential to carrying out the DFH program is:

- refrigerator to store vaccines;
- scales to weigh infants and pregnant women;
- blood pressure cuffs and stethoscopes for taking blood pressure of pregnant women and family planning patients;
- hemoglobinometer to check presence of anemia in women and children;
- laboratory reagents and simple apparatus (dipsticks) to check albumin and sugar levels of pregnant women;
- "pressure cooker"-type sterilizer;
- syringes and needles for immunizations;

- head stethoscope for checking fetal heart rate;
- "goose neck"-type adjustable light;
- simple but sturdy examining table;
- vaginal specula; and,
- sufficient instruments to do IUD insertions and minilaparotomy at larger clinics.

All of these items (except laboratory equipment and reagents) were supposed to have been supplied to all facilities where the division's program operates. Neither the districts nor the regions have an inventory of equipment by facilities, despite repeated requests and prodding from the supply section of the DFH.

During the site visits, the evaluation team observed the following conditions:

- o Virtually none of the dispensaries had any laboratory equipment or reagents to check hemoglobins, albumins and sugars.
- o Perhaps one-third of the facilities were without a functioning refrigerator. Some were said to be "missing" or broken. One dispensary lost its refrigerator in a fire a year ago and it has not been replaced. Another refrigerator blew up recently. Still another has been out of order for several months; the regional office had not been notified.
- o Scales were often missing. Several clinics had neither adult nor baby scales. Some had a heavy wrought-iron, lever-type baby suspension scale based on a design used in the Philippines.

Some of the auxiliaries expressed a dislike for this type of scale believing it dangerous (they feared dropping the baby). Dr. Jasmin, DFH chief of pediatrics, shares this concern. Often the basket-type baby scales are not calibrated to zero to correct for the weight of the basket, blanket, etc. Often, although available, good scales were not used.

One mobile clinic used a dilapidated, grossly inaccurate bathroom scale to weigh babies held by mothers, then weighed the mothers separately. Practically new adult and baby balance scales were found left in the back of the mobile team's truck.

- o Very few of the dispensaries had either a boiler or "pressure cooker"-type sterilizer. Some clinics were using alcohol for cold sterilization of hypodermic needles. Most clinics had ineffective means and techniques for sterilizing needles and syringes.
- o Head stethoscopes were seldom available at the periphery and the auxiliaries had not been taught how to adapt the common stethoscope for use in detecting fetal heartbeat (using bell attachment with two rubber bands tied to base; bell is held against belly by holding stretched rubber bands).
- o Although most of the facilities had the necessary table and essential equipment, vaginal examinations were seldom performed and often pregnant women and children were "examined" as they sat in a chair beside a desk or table, with the doctor or nurse or auxiliary sitting on the other side of the table.
- o Several of the blood pressure cuffs were broken. There was little evidence that this equipment would be replaced or repaired.

In sum, a current inventory of equipment, including its condition, and annual follow-up inventories are absolutely essential.

The provision of equipment per se may be pointless if staff do not appreciate the importance of performing the required procedures and examinations and the need to perform them conscientiously and interpret them intelligently. It will be difficult, if not impossible, however, to insist on more thorough examinations if staff do not have the means and support they need to respond to detected problems.

Dispensary Support

In most areas, dispensary support of resupply is given when the auxiliary comes to the regional district office to submit her reports and receive her pay. The system depends largely on the initiative of the auxiliary, who must pay for her transportation, although in most areas these expenses can be deducted from dispensary revenues generated from fees charged. From time to time, the pay is not ready and the auxiliary must make a second trip. In some districts, she is not paid until all her reports have been submitted; this requires two trips a month.

In the South Region, the burden has been taken off the auxiliaries and the office manager of the regional office uses the division-furnished vehicle to deliver supplies and pay to all dispensaries in the Les Cayes area. This method seems more efficient and gives the auxiliary better support. In such cases, the initiative for obtaining supplies and pay must rest with the auxiliary, who is better prepared to use locally available modes of transportation--horse, donkey or foot.

Information Systems

A. Patient Recordkeeping Procedures

1. Clinic-held Patient Records

The DFH has prescribed a standard system for patient records to be used at all installations. The system consists of three forms based on specific program activities: one form for infants and immunizations; one for prenatal care; and one for family planning.

The forms are simple and require only the brief recording of essential information. Procedures for completing the forms are described in detail in the DFH technical manual. Except for the major hospital units in Port-au-Prince, Saint Marc and other provincial capital areas, few facilities use all three of the division's forms. When they are used, often they are not filled out completely. Several facilities ran out of forms and either used plain paper or discontinued filling out any patient records, except for the journal of daily work.

In completing the infant/immunization record, some clinics did not record weight, and it may be inferred that weight was not checked. Very few clinics started the child's weight on the weight/age curve graph (on the reverse side of the form) and the presence of first- or second-degree malnutrition was seldom recorded; there were notable exceptions at a few clinics.

2. Patient-held Records

Two patient-held records are commonly used: the immunization record and the identifying card or piece of paper which lists only the number of the patient's dossier at the clinic.

At one clinic male clients were issued a take-home card on which to record the number of condoms issued and the date on which to return for supplies.

Patients at nearly all clinics had to pay a fee--two gourdes, \$0.40--to receive the initial card. This policy was established by the department

to lend the card sufficient importance so that a patient would not lose it. Nevertheless, there are considerable problems with patient-held records. Often, patients lose them; sometimes they get wet and deteriorate. One team member saw a mother give her card to her children to play with; the card was mangled promptly. Confusion results when clinics run out of stock and begin issuing cards in different colors. If, for example, a mother arrives with a blue card when the clinic is issuing pink cards, she is apt to say she does not have a card and then be issued a new one.

B. Filing and Retrieval of Records

Most clinics assemble a patient's records in a folder (dossier) and file it numerically by patient number, which is retained for life. Dossiers typically are filed in an egg crate-type wall cabinet, each compartment of which holds approximately 50 folders. The patient-held identification card, on which is written the dossier number, is used to retrieve the folder.

In many clinics, this is the only retrieval system used, and when the patient does not have an identification card, it is difficult to locate records. In other clinics (e.g., Isaie Jeanty maternity and outpatient clinic, Saint Marc Hospital), a register of alphabetical files is maintained. This provides a cross-reference to the patient's number. Only minor problems have been encountered with this system.

At two dispensaries in the South Region, the staff did not understand even the basic principles of a filing system. At one, the patient numbering system was rebegun each month with number one; at the other, records were simply filed in a drawer, one on the other.

In reviewing dossiers at several dispensaries, the team noted that many patients seemed to have made only one visit. However, it became apparent that this was not the case; due to problems in retrieving records, patients were often issued new dossier numbers upon subsequent return.

C. Compilation of Statistics

While statistics are compiled in different ways at different facilities, the process is carried out conscientiously and well at almost all sites.

Statistics are compiled both daily and monthly and forwarded to the division. There are three kinds of daily report forms: one for hospitals, one for dispensaries, and one for mobile clinics.

Hospital out-patient clinics use separate daily forms for pediatrics, prenatal services and family planning services. At the end of the day, all the dossiers are sorted by service type and the data transferred to

the daily report. Since the dossiers at these clinics are reasonably well maintained and the data transfer process apparently accurate, these daily statistics are, in the evaluation team's opinion, reliable.

Dispensaries use a day sheet (fiche de travail) to compile their daily statistics; the sheet has a line on which is listed each patient seen that day. In general, this method appears workable and is probably reliable.

The daily report of the mobile clinics is a summary tally by service. The reliability of the statistics varies, depending on how and when the sheets are completed. If the forms are filled out when the service is provided, the statistics are likely to be reliable. If, however, the statistics are compiled later from sketchy records made during the clinic visits, their reliability must be questioned. The monthly reports are compiled directly from daily summary reports.

There is some question about the reliability of certain specific statistical information. The statistics on nutritional status are particularly suspect. First, many children are not weighed; this means that statistics on the overall number of children "seen" in under-five clinics do not reflect the number of children whose health and growth are properly supervised. Second, and not infrequently, the records show children with weights for age substantially below the standard; yet, these are not recorded (or diagnosed) as malnourished. Worse, a statement of nutritional status often appears in the daily report when no nutritional assessment was made and no weight recorded in the patient's record. On the whole, however, the presence of malnutrition in small children is, in the evaluation team's opinion, probably under- rather than overreported.

A degree of unreliability is involved in designating clients as rural or urban. At least one hospital out-patient clinic in Port-au-Prince considers any patient not from Port-au-Prince a rural resident--even those who come from other cities.

The team also had some question about the annual statistics for immunizations. Because of the way in which these are compiled from daily reports, the statistics appear to report how many visits were made for first immunization, second immunization, etc. What they do not appear to provide is information on how many people received their first dose, how many received a second dose, and how many all three.

Fiscal Procedures

A. Fee Collection

There is no uniformity in either the fee collection practices or charges made for similar services at different facilities. In the North Region, three facilities charged different fees for the same service, although the regional administrator told the team a uniform fee schedule was used for all government-operated medical facilities in the region.

Patients are very conscious of these fee differences and often will travel considerable distance to get services at a lower price--even though the savings may be only \$0.20 or \$0.30. However, people are willing to pay higher prices when a reasonable cost for medicine is included in the fee. This was reported to be true at the Albert Schweitzer Hospital in the Artibonite Valley, where standard fees were eight gourdes (\$1.60) per visit but drugs were furnished as part of the charge. Drugs at private pharmacies are expensive (higher than in the United States for similar products). A "free" medical visit may be very expensive when a prescription is given for drugs that would cost \$10 or more at the local pharmacy (if available).

In the South Region, the regional administrator admitted that there is no standard fee schedule. Similarly, each facility in the Saint Marc district has its own fee schedule.

The evaluation team did not see or hear of charges being made for family planning services or contraceptive supplies (except for nominal charges for condoms in the condom machine commercial project in Port-au-Prince). Some units are charging for other MCH/FP services, such as under-five visits and prenatal visits and immunizations, even though it is clear division policy to offer these services free of charge.

Most auxiliaries and other clinical staff understand that MCH/FP services are supposed to be free; a few fail to differentiate these from other services provided by the department and for which fees are usually charged. Where this occurs, fees for immunizations are relatively high (as much as \$.60-\$1.00); the immunization is classified an injectable. "Shots" are highly regarded by people in the remote areas and such people are willing to pay substantial fees for this service even though they seldom understand the purpose of the injection.

Charlatan injectionists do a profitable business among the rural uneducated and, undoubtedly, some members of the health staff are tempted to profit personally from their government-sanctioned positions. This, however, seems to be an exception to the general rule, and the team did not feel that corrupt practice was a widespread problem in the MCH/FP program. Most of the inconsistencies in the fee collection practices seem to stem from lack of a clearly understood and enforced fee collection policy.

B. Cash Control Systems

Few cash control systems exist. The one used by La Providence Hospital in Gonaives is somewhat cumbersome but, nevertheless, effective. The administrator of the out-patient clinic at the Isaie Jeanty maternity clinic in Port-au-Prince took the initiative to develop a simple cash control mechanism that affords accountability on a service-by-service basis. This system could be a model for implementation at other facilities. The system at

the Sainte Suzanne dispensary in the North Region is quite loose. There, fees can be used to defray expenses such as transportation for the auxiliary. An accounting is kept in a simple ledger, showing receipts beyond a certain level (unspecified); excess amounts are sent to the regional headquarters. People in this area complained of excessive charges. The system is very informal and there is no published standard fee schedule or receipts for expenditures. There was no evidence of a realistic cash control system.

Patient Education

Although the division has made considerable effort to educate the public, there is little evidence of effective health education at the operational level. Clinic staff, in general, do not counsel people in their daily contact, and group education is rather stereotyped and unimaginative. The main problem seems to be the inability of professional (and auxiliary) staff to transmit knowledge in a way meaningful to the rural population's daily life.

Educational techniques, for example, use of posters, pictures, demonstrations, role playing and visual aids, are used minimally, even though large numbers of such aids have been prepared by the division.

Among other weaknesses, auxiliaries are not sufficiently informed about the every-day application of the general principles and knowledge they acquired in their training. This is very apparent in their failure to recognize incipient malnutrition in children, a lack of true comprehension of the relative nutritive value of commonly grown foods, and in their failure to recognize early symptoms and signs of complications in pregnancy. The people sensed these inadequacies and frequently expressed their lack of confidence in the auxiliaries' skills and knowledge. These weaknesses are often compounded by an ineptness and lack of interest in communicating with common people in rural areas.

The more highly trained professional staff--doctors and nurses--show widespread indifference to the use of health education to promote good health and prevent disease. They tend to see their role simply as clinicians who are needed to treat the more severe and complicated cases.

Personnel

A. General

Although the MCH/FP program has a great variety of technical and administrative staff, those most important in terms of project activities are:

- physicians;
- nurses;
- auxiliaries (including auxiliary supervisors and nutrition auxiliaries);
- community agents;
- health agents (formerly, sanitary agents);
- matrones;
- bureau chiefs (office managers); and,
- supply managers (including supply officers, storekeepers and depot managers).

As was noted in the discussion on strategy and planning levels, the most critical personnel deficiency is found among administrative, logistics and supply staff. This aspect of the personnel problem will not be discussed further here, except to call attention to the numerous administrative and logistic defects highlighted in this report.

B. Physicians

Physicians primarily are hospital-based, although they do staff clinics and some health centers. The overall ratio of physicians to population for Haiti is about one physician per 10,000 people, but over two-thirds of all licensed physicians (public and private) are located normally in the three major cities (and surrounding metropolitan areas): Port-au-Prince, Cap-Haitien (in the North) and Les Cayes (in the South). There are approximately 80 graduate physicians and about 30 resident physicians working with the MCH/FP program; the exact number varies slightly from time to time.

This total, 120 physicians and resident physicians, covers a population base of about 1.2 million people (about the same as the national average of one per 10,000). (See Table I.)

Forty-three physicians and 15 resident physicians--a total of 58 (about half)--are assigned to the three major metropolitan areas mentioned above. The MCH/FP program, therefore, provides a somewhat higher proportion of doctors for semi-rural district areas than the prevailing national average.

The team's observations regarding physicians in the program confirm the opinion of previous observers: physicians, particularly resident physicians doing their government-required "stages," are not very interested in their work. Many are bitter about doing a job that holds no interest for them. Their complaints are numerous: lack of opportunity for continued training;

isolation; lack of communication with larger medical institutions; lack of opportunities to attend scientific meetings; frustration because they cannot practice modern scientific medicine, given lack of laboratory facilities, equipment and drugs; and low salary--the most vocal complaint from the fully qualified physicians.

The team received repeated reports of physicians putting in only an hour or two a day at the public clinic or not showing up at all. This was not observed during the course of field visits, however. Several physicians interviewed frankly stated that because the \$250 a month was only about one-fourth of what they could earn in private practice, they did not feel an obligation to work at the public clinic for more than a few hours a day.

C. Nurses

Diploma nurses, like physicians, work primarily at hospital and hospital-based clinics. A few also work in satellite clinics and health centers. The shortage of qualified nurses in the program has already been noted in other sections of this report.

The national ratio of diploma nurses to population is about one per 10,000--approximately the same as the ratio for doctors. The availability of nurses for rural and semi-rural areas is greatly influenced by the competing opportunities for nurses for private practice in Haiti and abroad. A nurse in the program only earns about \$150 a month but in private practice she can earn about \$20 a day. Also, there has been a large outflow of nurses, previously to the United States, more recently to Switzerland.

According to the nurses working in the medical-nursing section of DFH, all but two of the Haitian nurses who were graduated in 1968 (about 400) migrated to the United States within six months of graduation. It is unlikely that the fully qualified diploma nurse will contribute much to the development of health services in rural Haiti.

D. Auxiliaries

The evaluation team considers the auxiliary nurse the pivotal staff member in the MCH/FP program. In most dispensaries, auxiliary nurses are the only providers of medical and health services. They supervise the health agent and train the matrones. The auxiliary is the critical person in terms of how effectively the clinic operates.

While the auxiliaries are generally enthusiastic and show great potential for delivering primary health care, their knowledge and skills are deficient in several areas, listed below.

- o Inadequate knowledge and skills to diagnose accurately and treat common health problems, such as tuberculosis, malnutrition, malaria and diarrhea.
- o Inability to identify high-risk patients in pediatrics and pregnancy cases.
- o Incomplete knowledge of all methods of family planning and of the symptoms and signs of common side effects sometimes experienced with use of contraceptives.
- o Inadequate clinic organization and management.
- o Insufficient knowledge and skills in supervision.
- o Inadequate and sometimes inaccurate knowledge and lack of application of health education methods.
- o Weakness in training and teaching skills.

The evaluation team believes that most of these defects stem from inadequate and improper training of the auxiliaries.

E. Health Agents

Health agents, both male and female, comprise a newly emerging category of personnel in the rural health care team. Currently, health agents have been trained and are attached to dispensaries in the North and South regions and the ODVA area. Their use is expected to spread to all areas of the country under the new plan for the rural health delivery system.

The responsibility for training and fielding health agents is shared by the Division of Family Hygiene and the Division of Nursing of the Department of Public Health. There have been defects in their initial training and in their logistics support in the field (described elsewhere in this report).

The health agents function primarily at the community level, and their role varies according to the region in which they work. In the ODVA area, they randomly visit the villages assigned to them, providing health education, primary medical care and refer patients for treatment and for family planning activities, but support to the health agents for other MCH/FP program activities has been minimal.

In the South Region, they have begun to implement the community-based rural unit system. At the onset, with the assistance of village-level collaborators, they took a census of each household, enumerating number of males and females; number of children under six; number of women of fertile age; number of pregnant women; number of births and deaths in past year. The census also determined whether anyone in the house is a matrone. This information was recorded on a master list using the SNEM (malaria control) number to identify the household.

The health agent also completes a form which lists the number of members in the household who fall within the target groups of the MCH/FP program; this is pasted near the door inside the house.

When they make a visit, the health agents talk about environmental sanitation and general hygiene (e.g., protection of water supplies, latrines, proper food handling and protection, the importance of handwashing and personal hygiene).

The health agent refers children under six for immunization, gives children under seven oral doses of vitamin A and sometimes talks about nutrition and family planning.

In the North Region, where community-based programs have not been promoted widely, the health agent works mainly as an extender of services down to the community from the dispensary. (S)he provides primary medical care and recruits clients for the pediatric, prenatal and family planning services offered at the dispensary. The health agent also recruits matrones for training.

To date, in none of the three situations described above has the health agent been used effectively due to a number of weaknesses in the support system (described elsewhere in this report).

F. Community Agents

The community agent comprises a unique category of health personnel developed, monitored and employed by the Division of Family Hygiene. The community agent functions only in urban or adjacent semi-urban neighborhoods, and his role is to provide education of the public and recruit clients for the MCH/FP services offered at the hospital and out-patient clinics. He is responsible for organizing the community to prepare it for visits to satellite clinics by mobile teams. Since the advent of the health agent, the community agent program is being phased out. The role of the community agent is being expanded to that of health agents. The community agent receives a higher salary than the health agent, which poses a problem in integrating the personnel.

Human Resource Development

A. Physicians' Training

Given the attitude expressed by the physicians and given their indifferent performance, it is apparent that most of the young graduating Haitian doctors do not receive much orientation and training in public health concepts and practices. However, it is the team's understanding that a Department of Community Medicine was recently added to the medical school with the aim of improving public health training of future graduates.

The evaluation team believes that the Department of Community Medicine should collaborate with the Department of Public Health to develop physician undergraduate and residency training programs that are more stimulating professionally than the present field "stages" under which the residents are used simply to perform routine medical consultations. Training programs should involve the young physicians in the dynamic problems of community health programs in ways that extend and broaden their clinically-based training. Residents should be engaged in a problem-solving situation, such as anemia of pregnancy; assessment of malnutrition and deficiency diseases; causes of high maternal mortality rates and ways to improve them; side reactions and complications of contraceptive pills; prevention of tetanus in the newborn; prevention and management of diarrheas as a community-wide effort; and early recognition and treatment of tuberculosis.

The Department of Community Medicine should guide and direct students in selecting and executing field studies based on the student's special field of interest.

With respect to the MCH/FP program objectives, physicians need better training and experience in several specific areas. From discussions with physicians in the field, the evaluation team learned that most of them had never been trained in IUD insertion. The use of IUDs as a family planning method is very limited in Haiti and cannot otherwise be promoted if the physicians are not trained to insert them.

For the first semester of 1979, the voluntary sterilization program reported only 92 sterilizations, compared with 1,200 clients who indicated an interest in being sterilized. It appears that the current sterilization program relies on a small number of physicians working in a few institutions. Given the simplicity of the current technology, particularly that involving minilaparotomy, there is no valid reason why more physicians, including young residents, cannot be trained to perform sterilization procedures. This would improve the program's chances of meeting its family planning goals.

The physician also needs more practical training and experience in the recognition of malnutrition, particularly in its earlier stages. The doctor tends to diagnose malnutrition only at the tertiary stage, when the patient

has kwashiorkor. Apparently, this situation exists because the doctor's past hospital-based experience dealt only with the late stages of malnutrition when hospital-type medical care is needed. Many of the younger physicians regard only severe malnutrition as a "disease" worthy of their professional attention. They do not perceive their more important role of recognizing and correcting malnutrition in its earlier stages, and they also fail to recognize the need to instruct mothers in proper child feeding using locally grown products.

B. Nurses

Given the relative unimportance of the nurse's role in the program and the small possibility that diploma nurses will work effectively in rural areas, the evaluation team did not give much consideration to the training needs of nurses.

C. Nurse Auxiliaries

The training of nurse auxiliaries is directed on the national level by the Division of Nursing of the DSPP and is undertaken at three schools, one each in Port-au-Prince, Cap-Haitien, and Les Cayes. The schools are independent of the Division of Nursing, with the latter responsible for developing the overall structure and content of the training program. The individual schools, however, are responsible for implementing their programs.

The course is polyvalent, that is, a graduate of the course is supposed to be equipped to function in any health delivery setting (hospital, health center, dispensary, community). The length of training time is 1,360 hours over a nine-month period.

The curriculum, published in March, 1979, has been an admirable attempt to provide more preparation for auxiliaries to work in the rural areas, but it simply is not adequate. The basic elements are in the curriculum, but some of the most important issues--nutrition, for one--are not emphasized sufficiently. The problem is even more fundamental.

The curriculum allocates many hours of both theory and practicum to tasks performed only in a hospital setting, with the result that not enough time remains for the teaching of tasks essential to the effective functioning of the auxiliary in a primary care setting. In addition, not enough time is allocated for experiential training in the classroom setting before field work is begun.

The Division of Nursing has issued a manual of functions and activities of all nursing personnel, including hospital auxiliaries, health center and dispensary auxiliaries and auxiliaries working in the community. This serves, in part, as a textbook in the training course and as a working guidebook.

The evaluation team recommends a new model for training public health auxiliaries working in nonhospital settings be established.

D. Health Agents

The health agent (or community agent) and, to a lesser degree, the nurse auxiliary are the categories of health workers most involved with the community. The performance of health agents varies. Some agents seem to lack a sense of what they are supposed to be doing. The service is superficial and given without conviction or apparent commitment. Often, rapport is not established with the people visited and, in some instances, respect is not shown. Little opportunity is provided for the people to discuss problems or to ask questions. In some communities the people indicated that they thought the agent's work was of little value because the training was too limited. Some thought the health agent's knowledge of health and sickness was only slightly better than their own. In many cases, this was undoubtedly true, and the agents' lack of in-depth knowledge about health problems may explain their reticence to encourage much discussion. Still, some health agents do seem to perform their job well and have established good rapport with the community.

The way in which health agents are selected or assigned to communities may be a factor that influences their relationships with the community. In general, all health agents are chosen by community councils. However, they do not always work in the communities that select them. In one instance four agents assigned to different areas were chosen by one council. All villages do not have councils. In another area, two agents were stationed in a community that had a community council but neither was chosen by that council. Some of these apparent discrepancies are due to changes in the health agent's resident village (sometimes following marriage) after his initial training and assignment.

The agents attend community council meetings but tend to focus on one particular council and do not expand their coverage. One agent, for example, attended four community council meetings in one month, but all were the same council.

The division plans to hold periodic refresher and in-service training courses for health agents. Several members of the team had the opportunity to attend two sessions of a week-long refresher course for health agents who had received their initial training 18 months before. The quality of the course instructors was judged excellent, although the training approach and techniques were less than ideal. Observation of this course, however, raised serious concerns. The level of knowledge of the health agents (who had been working over a year in the field) was surprisingly low.

Basic information that should have been required and used in the course of daily work appeared to be new to the agents. This points up the need for improved initial training, closer supervision and frequent in-service training. (See Appendix for additional suggestions on health agent training.)

One point must be emphasized. The training and retraining of health agents must be based on the idea of instilling in them the essential knowledge and minimum skills they need to do specific tasks. No effective training course can be carried out unless there is clear agreement on and understanding of precisely what tasks the agent will be performing. For example (s)he must be taught exactly which conditions (s)he can and should treat and with what specific dosages of medicine, for how long, and what to do if the medicine does not work. Every task required of a health agent must be precisely defined with a precise set of standard responses or choices of alternative responses available. The teaching of general principles and theory without specific, practical application has little place in the training of community-based health agents at this level. In order to effectively teach health agents, the instructor must be completely familiar with every step the agent must follow to accomplish each task in the setting the agent works. General competency in a subject area (nursing, medicine, nutrition, etc.) is not in itself a qualification for teaching health agents. In general, a well-drilled auxiliary or senior experienced health agent who is well-indoctrinated in the tasks and skills required, who has good teaching skills and teaching aids, is usually the best teacher for this category of worker.

E. Matrone Training

Matrones are trained at the district hospitals primarily by auxiliaries. The training course takes place once a week for four months. There are reports of significant dropout rates. Those who complete the course do a "stage" on the maternity ward before returning to their own practice.

In the team's opinion, the dropout problem is primarily due to the fact that the auxiliaries are ill-prepared to do the training. They themselves lack the skills to motivate the matrones in training. The auxiliaries' knowledge and skills in obstetrics are often deficient because their own training consisted of not more than one month an obstetrical service. The classes also lack attractive teaching materials and effective training methods.

Everything said about the training of health agents is equally true of the training of matrones.

Because the matrones are poorly educated and often illiterate, they are not suitably qualified to be instructors. Whoever teaches the course (presumably the auxiliaries) must be completely familiar with the conditions in the homes where the matrones do their work. The objectives of the course must be clearly defined, focused on a few basic areas requiring improvement. These should include the following:

- o The skills needed to recognize early the complications of pregnancy (e.g., dystocia, adverse position, excessive bleeding, toxemia). In this respect, the matrones should be encouraged to see pregnant women during the prenatal period and to refer patients with possible complications.
- o Clean, if not sterile, techniques at time of delivery, thorough hand-scrubbing, use of head covering and mask for face, minimum internal examination.
- o Proper sterile cutting of cord, with subsequent sterile dressing of umbilical area changed infrequently.
- o Need to refer mothers to the dispensary for tetanus immunizations during prenatal period.
- o Familiarity with methods of family planning and expected side reactions and possible complications of each method so that matrones can better counsel mothers in family planning.

Teaching methods must be based on the clear definition of tasks and the development of specific skills to teach each task or procedure. The steps are:

1. Tell them.
2. Show them.
3. Have them do the procedure.
4. Critique their performance, telling them what they did wrong and what they did right.
5. Have them repeat the procedure until they get it right.
6. Sum up what they should have learned.

Obviously, such a methodology requires models, teaching aid, a high degree of demonstration, actual practice and role playing.

Assessment of Types of Services Provided
in MCH/FP Program

A. Pediatric Services

The essence of the division's pediatric program is immunization against communicable diseases and monitoring of growth and development.

In practice, as observed in the clinics, sick children are treated at the same time that well babies are brought for routine immunization and monitoring. Both are often crowded together in a single waiting room, with the risk of cross-infection high. A system should be developed in every installation to separate the two groups in either separate waiting rooms or by separate scheduling.

The child immunization program has fallen far short of program goals. Although staff are generally conscientious in immunizing children who come to the clinic, they do not show enough initiative in recruiting patients or promoting and explaining the purpose and advantages of immunizations. Repeatedly, the team observed that mothers who brought their children for immunizations did not know why the "shots" were given or what protection their babies were receiving. Also, staff are generally lax about initiating action to correct logistic failures. Broken refrigerators are often not reported. When vaccines run out, the immunization program is interrupted and often no concerted effort is made to replenish vaccine stock. This deficiency was particularly prevalent in the Saint Marc district.

Considerable effort has been made to immunize babies against tuberculosis; 600,000 children aged 0-6 (60 percent of the approximately one million children in this age group) have received BCG vaccinations; 211,000 (21 percent) completed DPT; 50,000 (5 percent) completed polio. Eighteen percent (181,000) of the approximately one million women of fertile childbearing age have been immunized against tetanus. The lower rates for DPT, polio and tetanus are due mainly to the failure of patients to complete the series of three "shots" (Dr. Jasmin, DFH).

The program for monitoring growth and development of young children is probably the most deficient of all division services. There is considerable confusion about the nutrition education and child feeding aspects of these activities. Program norms recommend that supplemental feedings begin at three months. In general, this is a good suggestion because if properly promoted, it will accustom the baby to a diversified diet at an early age and offset the ill effects so often encountered at weaning.

Unfortunately, the suggestion that cow's milk or canned milk be introduced at this age causes difficulties. Most Haitian women breastfeed until 18 months, or even two years, and supplemental milk is unnecessary and dangerous, particularly because it encourages bottle feeding. Because most

rural Haitians have no proper way to sterilize bottles or refrigerate milk, bottle feeding is often a cause of infant diarrheas. Also, most rural Haitians cannot afford milk--or meat, cheese, fish, eggs and other protein foods recommended for early child supplemental feeding. People stated that they know these expensive foods are good for children but they cannot afford to buy them.

Some staff workers said that talking to parents about malnutrition and proper feeding of infants is difficult because the people get angry and say they feed their children what they can. Unfortunately, the value of feeding locally produced vegetables and protein foods, such as beans and peas, is not explained to the health staff, who only seem to identify milk, cheese, eggs, meat and fish as protein food sources.

Children are weighed rarely, often because there is no proper scale in the clinic. When a scale is available, it is seldom used, and only a few clinics plot the weights on the growth curve graphs.

The clinical diagnosis of malnutrition is also poor. As was noted, only kwashiorkor or the late stages of malnutrition are identified. In several facilities, when staff were asked about the prevalence of malnutrition in the area, they reported that there was only an occasional case. A cursory examination of children in the area revealed that perhaps half of the toddlers had some degree of caloric-protein malnutrition. Perhaps all but the most severe cases of malnutrition are accepted as "normal" by the auxiliary working among the rural poor.

Diarrhea is a leading cause of death among children under five. The people's understanding of the causes of diarrhea range from "do not know, teething, child putting something unclean in his mouth; eating powdered milk; to Gerber's." Some identified drinking dirty water as the principal cause. Undoubtedly, the lethal effects of diarrhea are associated with multiple causes.

In a society where perhaps half the rural children have some degree of malnutrition, a simple diarrhea or repeated diarrheas due to fevers, parenteral infections and specific dysenteric diseases can often be fatal, particularly when they advance to dehydration and loss of electrolytes. Part of the corrective measure to reduce mortality is better child nutrition. However, the principal deterrent is the lack of safe drinking water. This is substantiated by the frequent outbreaks of typhoid fever in rural Haiti.

In most of rural Haiti, although surface water may be plentiful from numerous streams, it is usually highly polluted. The program advises people to boil drinking water, and some do. However, in the Artibonite Valley, for example, where the available water comes from much-polluted irrigation canals, firewood is scarce and must be purchased. Many people lack the means to purchase the necessary wood.

There is a great need in rural Haiti for safe drinking water supply programs for small communities, particularly programs that apply newer types of appropriate technology developed in response to similar problems in lesser developed countries. AID/Washington has a vital interest in and the means to respond to this problem. Any child health program in Haiti that does not address the problem of developing safe village water supplies will be incomplete.

The division, through MCH/FP, provides oralytes to combat dehydration and electrolyte depletion associated with diarrheas. Staff are familiar with its proper preparation and use (despite ambiguous package directions). Oralyte is only available in small quantities in most areas and is usually reserved for the most severe cases. This defeats the whole purpose of the program. Health staff should be encouraged to use oralyte in the early stages of diarrhea to prevent its progression to severe dehydration, which is usually fatal when associated with malnutrition--even when sophisticated medical treatment is prescribed. Encouragement of early use of electrolytes implies that relatively large amounts of the product will be available in people's homes or at least in the community. It will require a much more intensive educational campaign to promote its proper and prompt use.

In some areas, fees are charged for oralyte, which precludes widespread use of the product. Oralyte must be provided free to a poor society like rural Haiti, if it is to be promoted effectively. Widespread distribution and use of oralyte, although very useful, will not solve the long-range problem of excessive early child deaths from diarrhea. Ultimately, permanent results will come only with widespread availability and use of safe drinking water and improvements in the general nutrition of small children. The vigorous promotion of oralyte use offers a practical measure to alleviate the situation until more permanent solutions can be found and implemented.

Because of severe reactions in very young children, typhoid immunization undertaken without supervision of proper dosage and intradermal injection techniques cannot be recommended as a practical mass preventive measure in the under-five group. Typhoid fever is not the major cause of infant deaths, but it is a serious and controllable problem in the adult population.

B. Family Planning Services

1. General

Family planning is the most emphasized of the division's various services, particularly on the part of the donor agencies. Even though pills and condoms abound, the program has not been very successful. One of the major reasons is the lack of an associated comprehensive family health care system for delivery of services. Haitian rural patients expect help

with and relief from their medical problems, including those of their children. When they do not get assistance, they lose interest and confidence in the system and stop coming to the clinics.

This is not to say that weaknesses do not exist within the family planning system itself. Norms are not followed. Although a variety of methods is supposed to be offered, family planning is almost synonymous with pills and condoms. Clinic work is done poorly; clients almost never have a pelvic examination. Often, blood pressure, weight and tests for albumin and sugar are not made. Any advantage or need for an initial visit is essentially negated.

2. Oral Contraceptives

At the time of the first visit, clients are given sufficient pills for one month. In most clinics, they are subsequently given a two-month supply. A few clinics give enough pills for three months on return visits. This requires an inordinate number of return visits to the clinic, and the client tends to drop out. The team believes it would be more realistic to give a three-month supply at the first visit and a proper physical screening should be performed. On second and subsequent visits, the clinic should provide a four-to-six-month supply. The health agent who lives and works close to the community should be used more often as the focal point for resupply and clinic visits required only once a year.

Patients have both legitimate and irrational fears about oral contraceptives. One such fear is cancer. Staff rarely address patients' concerns, nor do they try to head off unnecessary concerns by preparing patients for side effects they are likely to encounter.

3. Condoms

Condom distribution appears to be progressing better than the team expected. Condoms are well accepted by males and females both and there is little self-consciousness in obtaining supplies. Some reported, however, that condoms are torn sometimes, and others expressed fears of condoms being lost inside the woman or causing cancer. These concerns are minimal and susceptible to education and reassurance.

The condom vending machine in urban areas is well used. The army program has helped legitimize use of condoms and other contraceptives at all levels of the military.

4. IUDs

Use of IUDs in Haiti has declined in the past few years, primarily because of the staff's negative attitude. The team believes negative attitudes are the result of a lack of training of staff in insertion techniques; restriction of insertions to doctors who apparently do not want to spend the time necessary for patient preparation, insertion and education.

Since pelvic examinations are done rarely in the clinics and patients are not used to them, IUD insertion constitutes a disruption in the clinic routine for staff and an unfamiliar, unpleasant procedure for the patient. The team was told that many patients who have had IUDs inserted have experienced side effects--often heavy bleeding. The increased discharge associated with the IUD is said to be offensive to Haitian women. The team had no opportunity to evaluate the validity of this claim.

5. Foam

Despite DFH statistics that seem to show acceptance level of foam at the same level as condoms, this method does not appear to be widely accepted. Compared with stocks of pills and condoms, the supply of foam in the clinics and at district and regional warehouses was minimal. Foam was rarely recommended to patients by clinic staff, except in those clinics that do not prescribe pills for breast-feeding women. When foam was described, most women appeared uninterested. It was the team's impression that many women accepted the foam simply to please or appease clinic staff but had little intention of using it. Many women expressed a dislike for foam because it made them feel wet.

6. Depo-Provera

It is division policy that Depo-Provera be used only by women with many children and approaching menopause. No family planning personnel encountered mentioned of this method, and at none of the clinics was its use observed.

7. Natural Methods

Natural methods are supposed to be among those offered as part of the division's program. Natural methods are mentioned during the training courses for auxiliaries and health agents, but they are not described

in detail. It is expected that those who want to use natural methods will be referred to the Family Planning Association, but these services are not well developed. Natural methods are mentioned seldom by clinic personnel, and no referrals are made. The difficulties of applying natural methods in Haiti are well appreciated, but for those couples interested and motivated to use them, they should be made available.

8. Sterilization

It is the team's understanding that most sterilizations are now done in Port-au-Prince. In addition, a team from Port-au-Prince travels to different district hospitals to perform sterilization procedures. These are mainly in women; few male vasectomies are performed. Several Haitian obstetricians have been trained in the methods of female sterilization by laparoscopy and culdoscopy. The method of minilaparotomy is not used often and resident physicians are not trained in this simple procedure. Unfortunately, two deaths have been reported from postoperative infection among 92 sterilization patients. This extremely high fatality rate has stymied the female sterilization program. Although the team believes the technique of female sterilization by minilaparotomy is ordinarily a simple, safe method that can be done by most resident physicians, the perfection of aseptic techniques in surgery is an absolute prerequisite for any successful program. The entire program for sterilization should be reexamined.

9. Prenatal, Maternity and Postnatal Care

The goal of the division is to reach 75 percent of the pregnant women in the program area, providing each with three prenatal visits. Since the population covered by the program is about 1.2 million, this would be a target a 48,000* pregnant women receiving prenatal care. In 1978, the program recorded 48,442 women making prenatal visits; with respect to the number of pregnant women covered, the target was reached. However, most women made only one prenatal visit, and the majority came late in the second trimester or in the last trimester (except in Gonaives District, where women sought prenatal care much earlier). Both women who plan to deliver in the hospital and those who plan to deliver at home seek prenatal care. Apparently, Haitian women appreciate the value of these services.

* Pregnant women represent about 4 percent of the total population.

Prenatal patients are given only minimal assessment. Pregnancy history and obstetrical examination are usually incomplete. Checking for edema and signs of anemia is usually left until the second visit (which often does not occur). Most pregnant Haitian women are anemic. Average hemoglobin for pregnant women seen in university clinics is only nine grams, and many prenatal women only had six or seven grams of hemoglobin. Yet, since 1976, there has been no provision of iron, folic acid or multi-vitamins from the division supplies. No valid studies have been done on anemia in pregnant women--an obvious need that would better identify program requirements.

Blood pressure, weights and heights of fundus are usually performed but, as noted previously, proper equipment for these purposes is often unavailable (or not functioning) at the dispensary level. Urine tests for sugar and albumin and blood tests for hemoglobin are almost always done at the hospital-based clinics, but results are not available until the next visit, which often does not occur.

Equipment and reagents to test urine for sugar and albumin are not generally available at the dispensaries.

Tetanus immunization is done routinely at most clinics to protect the newborn against tetanus neonatorum. Only about one-third of the women who come for prenatal care complete the program requirements of a series of three shots, and less than half receive two or more shots. (Two immunizations of tetanus toxoid given at least a month apart would provide adequate protection for the baby. The program gives three in order to encourage mothers to return for prenatal visits and to accustom them to the three-shot routine that will be required later to protect the baby against whooping cough, diphtheria and tetanus.)

Patient education is supposed to be provided at all clinics to patients waiting for consultations. The session aims to cover nutrition, immunizations, personal hygiene and discussion of suitable maternity clothes. In practice, group education is given once, whenever the staff can find the time to provide it. This means that some patients will have left, others not yet arrived. Some women interviewed have attended prenatal clinics three times without being present for an education session. An important opportunity is lost in motivating women to continue prenatal care.

Most women interviewed did not understand the purpose of tetanus immunization and had only vague and often incorrect ideas and information about proper nutrition during pregnancy, and little knowledge and understanding of proper infant feeding. Few clinics took advantage of prenatal clinics to indoctrinate women in the value of child spacing and family planning. The team believes that proper education programs associated with prenatal clinics could be a vital factor in attaining program goals.

In Haiti, most deliveries are performed by matrones, trained and untrained. Maternal mortality rate is the highest in the Americas. Eclampsia and anemias are serious problems and high-risk patients are not recognized early. Although the maternity facilities in the city hospitals are usually crowded (e.g., the maternity facility at university hospital in Port-au-Prince), maternity beds in most district hospitals are underutilized. The program has made substantial gains in increasing the number of hospital deliveries from less than 10,000 in 1974 to about 36,000 in 1978. Since there are about 200,000 deliveries in Haiti per year, this only represents about 18 percent of the total deliveries, and the greater proportion of hospital deliveries occurs in the cities.

Maternity services in most hospitals are not very good. Only minimal attention is given to asepsis, and the mother is not adequately protected from cross-contamination and infection from other infected cases in the hospital. There is also a serious lack of resources. There are very few trained professional midwives in Haiti and (as was noted) few diploma nurses. Most deliveries are performed by ill-prepared auxiliaries. Also, basic equipment and supplies are lacking. These include oxygen tanks, infant incubators, laboratory equipment, blood transfusion sets, antibiotics, ergotrate, gloves and disinfectant solutions.

In many hospitals, including the very busy maternity unit at the university hospital, the physical facilities are grossly inadequate. There is often no suitable place for women in labor, nor sufficient trained nursing or auxiliary staff to give urgent cases emergency attention. Paradoxically, the main burden falls on the nursing auxiliaries, even at institutions where there appears to be an over abundant supply of resident physicians. Obviously, the entire system for hospital-based maternity services should be examined in depth, with particular emphasis being given to the overutilized city hospitals.

For most of the countryside, because of problems of transportation and communication, deliveries close to the resident community will continue to be the norm. Therefore, the team believes the greatest emphasis at present must be on upgrading and supporting the matrones. The most crucial first step in this direction is the proper training and retraining of the dispensary-based auxiliary, who now has little knowledge of proper maternity practices.

Very few patients are seen in postnatal clinics and little attention is given to the mother if she returns after delivery for immunization and child-care services.

10. Family Planning Recruitment

The methods used within the overall program to bring new clients into the family planning system are divided into two groups:

- o Health Service Clinic-based Recruitment
 - * Direct recruitment at community levels by health agents, matrones and, in some areas, village volunteers
 - * Recruitment from other MCH/FP services

- o Non-clinic-based Recruitment
 - * Factory program
 - * Household distribution
 - * Condom machines
 - * Army family planning program
 - * Unit of service system

A. Health Service Clinic-based Recruitment

1. Recruitment by Program Agents at Community Levels

Part of the defined role of health agents and community agents is to motivate members of the community to accept and continue to use family planning methods. Based on the team's observations, the performance of this role varied.

The health agents in the South Region were more concerned with problems of environmental sanitation and rarely brought up the concept of family planning. This is probably because, with PAHO assistance, this region has been implementing a community-based program based principally on extending the construction and use of latrines.

In the Saint Marc area, however, family planning recruitment appeared to be the first priority of both the health agents and community agents. Their relatively low level of success appears to be due to lack of support for other services for mothers and children. The health agents, however, were particularly active in postpartum recruitment, referring newly delivered women three months after delivery.

In the North Region, where priorities are balanced, the program emphasizes family planning activities within a mix of family health services. Program objectives in general have been delayed by problems of early organizational and logistical failures. In general, however, performance of

health agents has been limited by lack of proper training and poor supervision from auxiliaries. Also, public education and community participation and cooperation have not been very strong. The family planning activities were also delayed by emergency efforts to control a typhoid fever outbreak that occurred soon after the new regionalization program began.

The health agents in nearly all areas observed were not involved with condom distribution, which the team views as unfortunate, since the health agency is most accessible to village men.

2. Recruitment from Other MCH/FP Services

An important opportunity exists for recruiting patients for family planning during the course of providing other services. Mothers attending prenatal or postnatal clinics and those bringing in children for immunizations, nutritional assessments or medical care are particularly good candidates. The division's norms call for this kind of motivation and recruitment. Unfortunately, this is rarely practiced. Few staff members mention family planning when performing other services; others lack the motivation and skill to do effective recruitment. A notable exception was the satellite clinic team in Gonaives District, who displayed superb skill in relating the condition for which clients sought care to the need for family planning.

B. Non-clinic based Recruitment

1. Factory Program

The factory program and its lack of much early success have been described elsewhere in this report.

2. Household Distribution

The household distribution pilot project and its progress as of September, 1979, are described in the appendix. The preliminary conclusion is that household distribution of contraceptives in an area with preexisting family planning services increased the rate of users from about 4 percent at the onset to about 14 percent within eight months. Although it is too early to be fully confident in longer-term continuation rates, the team believes this method can be incorporated into the future work of the health agents.

3. Condom Vending Machines

Some 200 condom vending machines have been placed outside boutiques, restaurants, barber shops, markets, and the like and in factories throughout Port-au-Prince and a few outlying areas. Condoms sell for \$0.2 each in these machines. A team visits each machine on a regularly scheduled basis--every two to three weeks--to check the machines functioning and to resupply it. As anticipated, the machines have their share of mechanical problems, but these are relatively easy to remedy and extra machines are available if replacement is necessary. The machines have been well placed. Many are in remote reaches of the city; others are located near small local markets; still others on well traveled main roads. Most importantly, they are being used. Of the 15 machines checked on a routine work day, most were at least one-third empty (45-50 having been sold in a two- to three-week period) and several machines were empty. A machine holds 144 condoms. It was felt, though, that the teams were not particularly organized in terms of personnel or efficiency.

4. Army Program

The relatively good success of the army program has been described elsewhere in this report.

5. Unit of Service System

The team visited only one such unit of service system and the general reaction was good, particularly because the unit provided a method for good community participation and support. Its system of household census and preidentified target groups by household also provides good information on program progress with reference to known population coverage. It has not yet been used widely enough to permit an evaluation of its effectiveness on a large scale. However, the team believes it should be extended and modified as more experience with its use evolves.

V. RECOMMENDATIONS

V. RECOMMENDATIONS

Strategy and Planning Level

Recommendation 1

The national MCH/FP program should reorient its strategy and planning and concentrate its efforts on extending MCH/FP services to rural communities, using methods that will foster community understanding and participation through better use and support of auxiliaries and health agents and increased involvement of traditional community-based health workers, such as matrones and guerrisseurs.

A. Rationale

The program as now implemented is not responsive to the needs and expectations of the majority of the rural population. Further, the people perceive services as something provided by the government from the top down and they do not feel a sense of shared responsibility for improving the health and well-being of mothers and children. The clinically-oriented doctors, who under the present system are expected to play the prime role as extenders of services, are not interested or suitably trained for public and health extension work in rural areas. Their performance is indifferent and they have failed to provide the leadership and direction needed. Fully trained graduate nurses are too few in number to be effective, and they will not remain in rural areas because of the greater opportunity for financial reward in urban areas and abroad.

MCH/FP activities in rural areas can most effectively be executed by a corps of well trained auxiliaries and paramedical personnel, working closely with the community-based organization.

B. Implementation Guide

Essentially, the evaluation team recommends a change in overall approach to rural areas by adoption of the principles and practices of a primary health care system. These principles and practices have been well defined by WHO and are well known to all agencies participating in the program. They must, however, be carefully adapted to the conditions in Haiti --and that can only be done by health planners and officials working in the country.

The first step is acceptance of this recommendation by the Ministry of Health at the level of the Minister. It is important that everyone realize that MCH/FP activities be executed through an integrated health delivery system and, at the onset and for some time in the future, that these be the main types of services extending into rural areas. This is consistent with the Ministry's five-year plan and needs no basic policy change. The five-year plan anticipates use of primary health care methods in rural areas. (See appendix.)

The second step is to carefully correlate and integrate MCH/FP program activities into the ongoing plans for strengthening health delivery systems. This will require considerable coordination between the division, the Director General and the Division of Planning in the Department of Health.

PAHO and USAID/Haiti representation from both MCH/FP and general health development should participate in these deliberations to assure future donor coordination and support.

Once a policy decision and a common understanding are reached within the Ministry of Health (and participating donor agencies), the Division of Family Hygiene should adjust its style and organizational structure to patterns consistent with this decision. For example, the section for community development will need to be strengthened. Attention must be given to more precisely defined roles, patterns and norms for supervision at peripheral levels. The section for education and communications must give more attention and help for such communications skills as community organization, face-to-face public education and educational programs organized and conducted with community participation.

There are also implications for the administration section. Training and retraining of auxiliaries, health agents and traditional matrones and guerrisseurs will become more important. DFH staff are fully qualified to recognize and define the style and content changes that will be needed within the division to implement this recommendation. In doing so, the process should be a joint effort so that the division benefits from the viewpoint of the various sections.

C. Expected Outcome

Adoption and implementation of this recommendation will result in more meaningful and better accepted MCH/FP services for rural communities and will minimize the present dependency on highly trained professional staff who are not apt to be truly committed to or interested in these aspects of the program.

Recommendation 2

The MCH/FP program activities should be correlated with Ministry of Health programs for the development of health systems and the plan for regionalization. PAHO and USAID/Haiti should review their parallel inputs into these programs and better relate them to the system and infrastructure created through activities under the MCH/FP program.

A. Rationale

The evaluation team found abundant evidence of a nonintegrated approach to development of these parallel systems. This has produced confusion in the field, where supply, equipment and administrative procedures are fragmented, resulting in shortages of essential commodities vital to the MCH/FP program.

B. Implementation Guide

The first step is to hold a series of coordination meetings between the Ministry of Health (Director General and Chief of the Division for Planning and DFH director) with local representatives from USAID/Haiti, UNFPA, PAHO and UNICEF, using the present report as a basis for review of the interrelationships of the two programs.

The second step (resulting from the first) should be the appointment of a task force representative of the various interests to prepare a plan to integrate the two programs. Specific areas that should be considered are:

- o Training and retraining of personnel, particularly those at the periphery (e.g., auxiliaries and health agents).
- o Standardization of essential drugs and equipment at each level, starting with the health agents and working upward to dispensaries, health centers and hospitals.
- o Standardization of supply procurement procedures at all levels.
- o Clarification and designation of types and quantities of supplies and equipment provided from each source, including the Department of Public Health, USAID/Haiti, PAHO/Haiti, UNICEF and UNFPA.

- o Clarification of the supervision chain, with clear designation of duties and responsibilities at all levels.
- o Application of the principles and practices pertaining to primary health care (see Recommendation 1).
- o Agreement on a time-phased plan to integrate the two programs.

C. Expected Outcome

If this recommendation is implemented, it should result in more efficient and effective field operations; smooth the transition to integration under the regionalization scheme; and promote better understanding and cooperation within the Ministry of Health, resulting in more coordinated planning and execution.

Recommendation 3

The DFH should review its methodology in the current and future use of mobile teams for providing services through satellite clinics. In general, the mobile teams' effectiveness should not depend on the availability and interest of the physicians (or resident physicians). Team operations should be directed by well trained and motivated auxiliaries or, where available, a public health-oriented nurse.

In general, the mobile team should be used to supplement the work of community-based health units so there is a continuity of services in the interim between team visits.

A. Rationale

The use of doctor-directed mobile teams in the conduct of satellite clinics was observed as badly managed in general.

Mobile teams are expensive. Vehicles require much maintenance and repair costs are very high. They should be used judiciously and only when appropriate. Horses or donkeys may be better suited to the terrain in many areas.

B. Implementation Guide

Action can be taken directly by the DFH in consultation with the district administrators.

C. Expected Outcome

If implemented, this recommendation should result in less vehicle costs and reduced high costs of mobile team satellites; better community acceptance and responsiveness to services; and more efficient use of personnel.

Recommendation 4

The DFH, in cooperation with the Bureau of Nutrition, should develop a more comprehensive approach to health services for children. Specific areas that need improvement are:

- o Better training of health staff in recognition and management of malnutrition.
- o More relevant health education of the public, particularly in proper early child feeding.
- o Better correlation of nutrition recuperative centers (or foyers) with fixed health units.
- o Regular provision of iron and vitamins in under-five clinics.

A. Rationale

During field site observations, the evaluation team consistently found the area of child nutrition and health to be neglected. Field workers failed to recognize malnutrition, except in the tertiary stages. Guidance given in child feeding was frequently inappropriate or not implementable within the severe economic constraints of the rural poor. Instructions to mothers were frequently misunderstood and often resented because they were not practical.

B. Implementation Guide

The first step is to hold a series of coordination meetings between the pediatric section of DFH and the Office of Nutrition and to adopt a mutually agreed-upon plan. The norms for nutrition education and program implementation recently published by the Office of Nutrition are a sound basis for beginning discussions and should be adopted, perhaps with slight modifications.

The iron and multi-vitamins suitable for use in early childhood should be added to the drug list furnished by UNFPA.

C. Expected Outcome

Better recognition and control of nutritional defects in children and better public acceptance and attendance should result.

Recommendation 5

The DFH, in evaluating its MCH/FP program, should give more attention to the quality and public acceptance of services offered and not base evaluations and program progress so completely on reported quantified service data. The participating agencies should not place as much stress on attaining quantified program targets in the justification for continued support to the program.

A. Rationale

Team observations confirmed that the quality of health care given at prenatal, under-five clinics is generally poor. Children are not properly examined; mothers receive little guidance in child feeding; pregnant women do not have a proper history of physical examination; and proper steps are not taken, generally, to recognize and refer high-risk patients.

B. Implementation Guide

Action can be taken directly at the DFH level with a coordinated effort between the sections of supervision, evaluation and medicine and nursing.

C. Expected Outcome

Quality of services should improve; more relevant evaluations of the impact of program services be made; and better public acceptance, support and attendance be gained.

Recommendation 6

The DFH should devote more time and effort to the training and supervision of the administrative staffs at district and regional levels.

A. Rationale

Weaknesses in administrative and logistical support were found to be a common problem in most of the areas observed. There is a quantitative lack of administrators in the field and quality of performance is relatively poor.

B. Implementation Guide

The limited administrative staff at the DFH central level are overburdened with administrative details related to the operations of the central headquarters. Many of these duties could be delegated to subordinates and administrative procedures and clearances streamlined.

The addition of a PAHO advisor will help, though not solve, the problem. At least one additional well qualified Haitian administrator should be added to the DFH staff, permitting more site visits to and follow-up of field operations. The administrative manual is quite idealized and probably overelaborate for operations in a lesser developed country like Haiti. Also, procedures are not currently followed in the field. The administrative regulations should be simplified.

C. Expected Outcome

The administration of field operations should be improved.

Recommendation 7

The DFH should change the patterns of supervisory visits to permit a more penetrating appraisal of MCH/FP activities at all levels, particularly at the periphery. The following are recommended:

- o More prolonged team visits at health units to permit observation of services over a period of several days.
- o Periodic in-depth assessments of activities relating to a specific program area, such as child care, family planning and prenatal care. This should be a vertical assessment down through several service levels so that a more comprehensive pattern of interrelationships of supervision and support become apparent.
- o Information gained from such supervisory visits should be more frequently used as a basis for DFH staff conferences with analysis and observations from different sections of the division. The experience thus gained should be used for future program guidance.

A. Rationale

The evaluation team found a certain degree of isolationism among members of the individual sections of the division, with a tendency to restrict observations and interpretation to a particular area of responsibility of concern.

A larger role in participating in the overall evaluation of program progress would, in the team's opinion, tend to make the division a more cohesive group and broaden individual perceptions of overall problems in the program.

B. Expected Outcome

A more realistic evaluation of the DFH program, with a better basis for program decisions and changes, should result.

Recommendation 8

Regularly scheduled monthly (or at least bimonthly) coordination meetings should be held between the director of DFH (and relevant staff members) and local representatives from UNFPA, PAHO and USAID/Haiti to discuss problems related to the program and progress and to assure better understanding and coordination.

A. Rationale

Lack of coordination between DFH and the donor agency has been a long-recognized problem and was still evident when this evaluation was made

B. Implementation Guide

Action to implement this recommendation should be initiated by the director of the DFH. All agencies concerned must fully cooperate by sending informed representatives to all meetings.

C. Expected Outcome

This will result in better coordination and better and earlier recognition of problems and action to solve them.

Recommendation 9

The MCH/FP program should not extend its area or population coverage for the next two years but instead concentrate on working out program problems in an integrated approach with the Department of Public Health in a specific representative area; the ODVA area seems most appropriate for this period of field testing methodology.

A. Rationale

The team found numerous defects in the MCH/FP program, many of which are associated with a lack of coordination with parallel efforts being made in the Department of Public Health towards development of a health delivery system. The ODVA has all the program elements common to both the DFH program and the department, including the use of health agents. The team found the existing program in the ODVA area to be particularly faulty, although this was an area for previous priority and emphasis. Every type of problem encountered by the team exists there and it would, therefore, seem to be a particularly suitable area to test the potential for an integrated program in the immediate future.

B. Implementation Guide

The first step will be for the division and the department to agree on the use of the ODVA (or suitable) area as a testing ground.

The second step will be to develop and approve a well defined plan of action for the Division of Planning, Director General and director of the Division of Family Planning. This plan should address the following issues:

- o Consideration of present leadership and staff of Saint Marc District and possible strengthening.
- o Retraining of administrative staff.
- o Retraining of auxiliaries and health agents.
- o Redefining of community agents' role and supplemental training.
- o Reexamination of satellite mobile teams' functions and methodology.
- o Organization of community structures.

- o Strengthening of supply/logistical support structures, including inventory of equipment, repair and replacement.
- o Orientation of resident physician staff in rural public health principles and methodology.
- o Strengthening of supervisory system.
- o Development of realistic, practical public education campaign.
- o Built-in system for program evaluation, starting with baseline assessment of present status.
- o Integration of nutrition rehabilitation activities.

C. Expected Outcome

This should resolve existing coordination problems with the Department of Public Health and result in the evolution of a practical, feasible system for developing district- and, eventually, region-integrated programs.

Management Level

Recommendation 1

A pilot project should be undertaken to develop and test a new model of training specifically for public health auxiliaries who will be working in nonhospital settings.

A. Rationale

While the new curriculum developed jointly by the Division of Nursing and the directrices of the National Auxiliary Training Schools points out the importance of preparing auxiliaries to provide health care to the far reaches of Haiti, the design of the training course does not support this goal.

The training course is polyvalent. That is, the same course is meant to prepare both public health and hospital-based auxiliaries. Since it is only a nine-month course, it can do neither well. There are many differences between the two jobs. The public health orientation is different from that of medical care. In many ways, the tasks of the two and the resources available to them are at odds.

Finally, the hospital-based auxiliary will be working under the direct supervision of a more skilled medical practitioner. The public health auxiliary will be a primary health care provider and educator, for the most part working independently and training and supervising others. The development of a training course that specifically prepares auxiliaries in a public health career will be of benefit to the Department of Health and Population in the implementation of its upcoming rural health service delivery system, as well as to the division in its current program.

B. Systems Affected

It is anticipated that in implementing this recommendation, the training system is the primary system to be affected. Modification of the supervisory system will also be required to ensure that the training the auxiliary receives will be reinforced on the job.

C. Implementation Guide

Implementation of this recommendation will require the approval of the DSPP and coordination with the Division of Nursing and the administrator of the district/region in which the pilot project is undertaken.

The following should be considered as integral to the recommendation:

- o The training program should be attached to the regional/district office rather than to one of the National Auxiliary Training schools. Where appropriate, instruction may be provided jointly, but the administration of the two programs should be entirely separate.
- o The course should last at least 12 months.
- o The course should be organized into four major phases:
 - * Phase I: Classroom Training
 - * Phase II: Closely Supervised Practicum in a Model Clinic
 - * Phase III: Field Placement under Supervisor
 - * Phase IV: Review
- o Classroom training should integrate experiential training (on-the-spot practice) with didactic instruction. When training for tasks requiring patient/auxiliary interaction, the technique of model/role-playing/critique should be employed. The time for classroom training should be greatly expanded.
- o A model clinic should be established and staffed by personnel skilled in training and supervising and technically competent in the tasks they perform. Students should be rotated through the various stations of the clinic. Hospital practicum on obstetrical services should be introduced at this time.
- o Field placement should include work in a dispensary and as a visiting auxiliary in the community, with progressive withdrawal of direct supervision.

- o Review should consist mainly of group problem-solving using situations encountered by students in the field.
- o The auxiliary training curriculum of March, 1979, should be reviewed and elements relating only to hospital care eliminated. This curriculum essentially includes all the elements required to train public health auxiliaries, but the emphasis and time allocations are inappropriate. Those areas that should be further emphasized are:
 - * Diagnosis of malnutrition and proper infant feeding using locally available products.
 - * Diagnosis and treatment of most commonly encountered diseases.
 - * Obstetrics and familiarity with all methods of contraception.
 - * Skills in interpersonal communication, motivation, patient and community education.
 - * Skills in training other health workers, such as health agents and matrones.
 - * Skills in supervising other health workers.
 - * Skills in clinic administration.
- o In order to replicate the course, detailed lesson plans should be prepared; these should include teaching methods and exercises to be followed. Course objectives should be developed to include performance and skills objectives as well as knowledge objectives.
- o Technical assistance should comprise an expert in training methods. This skilled person should assist in the development of the course and in training the trainers.
- o An evaluation should be built into the project to compare subsequent job performance of those trained under the current system with that of individuals trained under the pilot project.

D. Expected Outcome

It is anticipated that those who choose careers as public health auxiliaries and who are trained specifically for such work will perform their roles more effectively and will remain on the job longer.

Recommendation 2

Patient recordkeeping procedures should be strengthened at the level of service delivery.

A. Rationale

The evaluation team found that many clinics were not using the standard patient record forms prescribed by the DFH. Also, many units have established filing and record retrieval systems that are inefficient. Anticipating integration of provincial and rural health services in the future, a standardized system for recording and retrieving patient records is patently necessary.

B. Implementation Guide

With DSPP sanction, the division should begin to work with district/regional administrators to standardize the recordkeeping procedures and to train service delivery staff in their use. The areas to which attention should be given are:

- o Use of division forms and registers exclusively for prenatal and postnatal care and pediatrics.
- o Use of one standard adult medical form at least district-wide.
- o Adoption of the Isaie Jeanty filing procedures for all fixed clinics, emphasizing a permanent registration file.
- o Ample office supplies for implementing procedures.
- o Standard procedures for retrieving patient records from registers used by mobile clinics.
- o Detailed protocols for implementing recordkeeping procedures to serve as a basis for training and supervision.
- o Training and supervision to emphasize accuracy and completeness of records.

In addition, the question of keeping detailed records on male contraceptive users should be reviewed. The current procedures are not patient care-oriented and are not even likely to provide the division with the statistics it desires.

C. Expected Outcome

It is anticipated that implementation of this recommendation will result in improved quality care if providers are trained to consider previous history already in the record when making diagnoses and providing treatment. It is also anticipated that standardization of procedures will assist staff in keeping more useful and usable records with minimal increase in clerical time.

Recommendation 3

Their burden on the auxiliaries and health agents of communicating with their supervisory levels shall be minimized.

A. Rationale

In some areas, the burden falls on the auxiliaries and health agents to travel, at their own expense, to their supervisors to turn in their reports and pick up their supplies and pay. This is a legitimate part of their job and responsibility for it should be on the program.

B. Implementation Guide

Although auxiliaries and health agents are paid by the districts and regions, they furnish data and reports of great value to the division. Therefore, both the division and the department should collaborate to facilitate these interrelated processes. The problem may be alleviated as follows:

- o Pulling together the reporting, resupply and payment process so that only one visit is necessary.
- o As much as possible, requiring district/regional staff to travel to dispensaries once a month for this purpose.
- o If auxiliaries or health agents must incur expenses during course of their work, prompt and full reimbursement of expenses should be made.

It is recognized, however, that many communication problems in the field cannot be avoided due to terrain and weather conditions.

C. Expected Outcome

It is anticipated that implementation of this recommendation will increase job satisfaction among auxiliaries and health agents and perhaps increase their tenure.

Recommendation 4

The fee collection procedures must be standardized.

A. Rationale

Fees are collected at most DSPP dispensaries. Wide inconsistencies exist in the fees charged between clinics in the same geographical area and even within a clinic. Even though division services are supposed to be provided free of charge, fees are being collected for them at some clinics. There is no cash control mechanism in most clinics.

B. Implementation Guide

Fees are primarily within the domain of the DSPP, but problems with the issue of fees affect all services provided in the clinic. The division might well act as a facilitator, working directly with the district/regional administrator.

In standardizing fee collection, the following should be considered:

- o A uniform fee schedule should be prepared at least at the district level.
- o The fee schedule should be posted conspicuously for reference by both staff and patients.
- o Cash control procedures should be instituted. (Those used at Isaie Jeanty might serve as a model.)
- o Guidelines should be prepared enumerating allowable use of fees collected.
- o Detailed protocols for implementing collection of fees should be developed to serve as a basis for training and supervision.
- o An official policy should be adopted and communicated to staff so that services will not be withheld if the patient is unable to pay.

C. Expected Outcome

It is anticipated that implementation of this recommendatoion will reduce the practice of "shopping around" for health care services on the basis of costs, bring order to the collection procedures and provide accountability.

Recommendation 5

A series of in-service courses for all auxiliaries currently working in the program should be provided systematically.

A. Rationale

Observations of the evaluation team revealed that auxiliaries' performance is deficient in several critical areas. These deficiencies must be corrected as quickly as possible to enable the division program to meet its qualitative and quantitative goals.

B. Systems Affected

In addition to affecting the training system, this recommendation is expected to affect the service delivery system. The short-range effect on the latter system is likely to be a minor problem, disruption in service while auxiliaries are participating in the course. In the long run, however, the quality of service delivery is expected to improve.

C. Implementation Guide

The division should begin working with the district/regional administrators to plan and implement the in-service training. The course should concentrate specifically on the following deficient areas;

- diagnosis and treatment of malnutrition and communicable diseases;
- skills in educating and motivating the public;
- training skills;
- supervisory skills; and,
- administrative skills.

Experiential learning in the classroom should be an integral part of the in-service training program. Sufficient time should be allotted to each area so that performance objectives can be met.

D. Expected Outcome

The performance of auxiliaries now on the job will be improved and, in turn, the quality of services at dispensaries. Improved training and supervisory skills of auxiliaries should result in the improved services provided by health agents and matrones.

Operations Level

Recommendation 1

The system for supervising auxiliaries at the dispensary level and the health agents and matrones under auxiliary supervision should be strengthened.

A. Rationale

The team found that auxiliaries at the dispensaries were neither receiving much supervision from the districts nor giving much supervision to the health agents and matrones working in the communities. DFH norms do not define procedures for these supervisory levels.

B. Implementation Guide

The first step is for the DFH to prepare and publish norms and procedures for supervising health workers at these levels. The system used in the South Region for supervising field installations could be used as a guide.

The auxiliary must be retrained in techniques and methods of proper supervision. Responsibility for this should be shared by the Division of Nursing and Paramedical Training of the department and the medico-nursing section of the DFH.

The DFH section for supervision should give more emphasis to supervision at the peripheral levels.

C. Expected Outcome

Better services at dispensary and community levels should be provided.

Recommendation 2

Better vehicle control should be instituted and enforced at district and regional levels.

A. Rationale

The team found that despite very precise rules for vehicle control (set forth in the DFH administrative manual), virtually no district or region is using a proper system for vehicle control.

B. Implementation Guide

The following steps should be taken:

- o The Director General, Department of Health, should initiate action requiring all districts and regions to comply with DFH-prescribed administrative regulations for vehicle control.
- o During site visits, DFH supervision teams should check for compliance and report districts and regions that continue to ignore the regulations.
- o Districts or regions that fail to cooperate should have their vehicles repossessed by the department. This action, if necessary, must be supported by the Director General and the Minister of Health.
- o Donor agencies should refuse to furnish any more vehicles if vehicle control is not established and maintained at district and regional levels.

C. Expected Outcome

The unauthorized use of vehicles should be reduced and the cost of replacing vehicles, providing fuel and paying for vehicle repairs should be reduced.

Recommendation 3

The list of essential drugs furnished to health agents should be revised and limited to the fewest possible varieties. This should be consistent with the requirements for primary health care services performed.

A. Rationale

The team found that the list of essential drugs initially furnished to health agents contained 23 items but was not a properly balanced mixture designed to respond to common complaints and illnesses found in rural communities. Health agents are not being resupplied with drugs after their initial issue is exhausted.

B. Implementation Guide

The team recommends that the following essential drugs be provided:

- o Aspirin for adults and children
- o Cough syrup
- o Chloroquine 250 mg.
- o Elixir of paragoric
- o Bicarbonate of soda tablets
- o Oralytes or serum buccal
- o Multi-vitamins with iron and folic acid
- o Vitamin A
- o Potassium permanganate
- o Oral penicillin
- o Merthiolate
- o Antihistamine (phenergan, or equivalent)
- o Ophthalmic antibiotic ointment
- o Oral contraceptives, cream, foam and condoms

Once a list of essential drugs is adopted, foreign donors (e.g., UNICEF) should furnish adequate stocks. The list should not be changed capriciously because lead time is needed in furnishing any changed item.

Health agents must be thoroughly taught to properly use the drugs and to recognize adverse reactions to them.

C. Expected Outcome

Drugs for health agents will be restocked more efficiently; fewer stock ruptures will occur; and better health aid training will be provided.

Recommendation 4

The DFH, with the backing of the Director General of Public Health, should enforce a system of annual MCH/FP equipment inventories at all health installations in the program; the serviceability of each major item should be determined.

A. Rationale

Although the DFH has repeatedly requested from field clinics an inventory of equipment, the team learned that few units have furnished such a list.

Numerous shortages and breakdowns at field units were noted. Among notable essential equipment lacking were gas refrigerators, baby and adult scale, hemoglobinometers, blood pressure cuffs, head stethoscopes and utensil sterilizers.

Shortages and broken equipment are not reported regularly by field units.

B. Implementation Guide

The DFH administrative section should take stronger action in insisting that periodic equipment inventories be made. The supervision section of DFH must give stronger emphasis to checking the presence and condition of essential equipment when making site visits. In making requests to donor agencies, the DFH should make adequate provision for the stocking of spare equipment for replacement units, either temporarily, during repairs, or permanently, if equipment is nonrepairable.

C. Expected Outcome

The provision and maintenance of equipment in the field should be improved and better planning for repairs and replacements undertaken.

Recommendation 5

With the cooperation and support of the Director General of the Department of Public Health, the DFH should encourage the Department of Community Health at the medical school to institute a program of public health studies to be carried out by the residents during their "stages" in the provincial areas. Such a program should encourage the young physicians to engage actively and independently in problem-solving situations commonly experienced in rural and provincial areas.

A. Rationale

The team found that residents were bored with and disinterested in their work during their "stages" in field installations. Part of the problem is the common use of residents for routine repetitive duties that do not stimulate interest or involvement in community health problems.

B. Implementation Guide

Although the prime responsibility for implementing this recommendation will rest with the medical school and the Department of Public Health, DFH professional staff, from the advantage of their perceptions of overall patterns and problems in MCH/FP, are best able to identify subject areas requiring applied field research. Among these areas are anemias of pregnancy, common infant feeding patterns of rural villagers and their effects on malnutrition, epidemiology of eye diseases, complications and side effects of contraceptives, etc.

USAID/Haiti should be willing to respond to the need for special but not elaborate additional equipment and supplies to support the student development projects.

C. Expected Outcome

It is expected that young resident physicians will become more interested and involved in the dynamic problems and aspects of field public health practice.

Recommendation 6

The DFH should promote more actively the use of all methods of family planning in the MCH/FP program and give particular attention to the expanded use of IUDs and sterilization procedures.

A. Rationale

The evaluation team found that pills, foam and condoms are the only methods offered at most health units. Only 92 sterilizations have been performed, despite a fairly high client interest in the procedures. Also, IUDs are seldom mentioned or offered as a contraceptive method at most of the hospital-based clinics. Young physicians said that they have not been taught how to insert IUDs.

B. Implementation Guide

The following steps should be initiated:

- o More physicians and resident physicians should be trained to insert IUDs and to perform female sterilizations using the minilaparotomy method.
- o Given the past history of two female deaths from post-operative infection following routine sterilization, aseptic techniques of some institutions and individuals must be carefully reviewed and corrected.
- o If physicians and residents do not demonstrate an interest in IUD insertions, nurses and auxiliaries should be trained and used for this procedure.
- o Patients electing to use IUDs should be properly educated in advance so that they understand commonly experienced side effects. Proper education eliminates public distrust and dissatisfaction with the method.
- o Doctors and residents should be taught how to provide proper client counseling with respect to IUD usage.
- o The teaching of traditional methods of contraception should not be ignored in the clinics.

C. Expected Outcome

Offering a variety of contraceptive methods should increase the number of contraceptive users and heighten the program's effectiveness.

Recommendation 7

The DFH should expand its efforts to train matrones and develop more precise guidelines for the supervision, support and refresher training of previously trained matrones now working in rural communities.

A. Rationale

Approximately 83 percent of all deliveries in Haiti are still performed by matrones and less than 30 percent of the matrones have received any training.

The evaluation team could find no evidence of any pattern or prescribed system for supervising and guiding matrones, except the requirement that the matrones come to the dispensary periodically for supplies.

The matrone has the closest contact with most rural women, at least when these women deliver, and usually shortly after delivery.

The matrones' role in recruiting family planning acceptors has not been fully developed.

B. Implementation Guide

The main problem in teaching and guiding matrones seems to be the inadequate obstetrical training and knowledge of the auxiliaries in the rural dispensaries. The training course for auxiliaries should be strengthened, emphasizing the obstetrical aspects. The training and supervision of matrones should be emphasized especially in the pilot training project (see Recommendation 1, Management Level).

The DFH section for supervision should collaborate with the obstetrical/gynecological section to prepare guidelines for matrone (and health agent) supervision as a basis for auxiliary training.

Greater use of community-based programs should foster greater involvement of matrones in the MCH/FP program.

C. Expected Outcome

Better maternity care will be provided; neonatal tetanus in rural areas reduced; and recruitment for family planning increased.

Recommendation 8

The DFH should take the initiative in promoting greater efforts within the Department of Public Health to develop programs for safe water in Haiti's rural communities.

A. Rationale

Most of the diarrheas resulting in early child fatalities in Haiti are associated with drinking and other use of unsafe water. The high incidence of malnutrition and frequent water-borne infections together are the main cause of death at an early age. Permanently reduced mortality rates for children under five will not be realized until improvements in community drinking water are made.

B. Implementation Guide

The DFH should advocate this recommendation, although DFH staff ordinarily would not assume prime responsibility for implementing action.

The Director General and the chief of the Division of Planning, Department of Public Health, should request short-term technical advisers specializing in this subject from one of the donor agencies. AID/Washington has a program specifically designed to respond to such requests; the program particularly addresses the relationship of small community water supplies to primary health care. Any program in safe water provision should be based on the findings and recommendations of the consultants.

C. Expected Outcome

The number of cases of diarrheas and excessive related deaths in young children should be reduced. The incidence of typhoid fever should be reduced, and better general health and well-being enjoyed by all members of the community.

Appendix A

TRAINING OF HEALTH AGENTS

Appendix A

TRAINING OF HEALTH AGENTS

The original training course for health agents was prepared by the Division of Family Hygiene. Those responsible for its preparation were:

Dr. Serge Rochemont, Chief, Section of Medical and Paramedical Teaching, Department of Public Health and Population (DSPP)

Dr. Laurent Eustache, Chief, Education Section, Mother-Child Hygiene Division (DSPP)

Mrs. Marie-Louise Lafontant, Director, Nursing Bureau (DSPP)

Miss Helen McDowell, WHO Consultant, Nursing Bureau

Mrs. Moreau Julien, Assistant, Education Section, Mother-Child Hygiene Division (DSPP)

At this time DSPP has responsibility for the training. It is carried out through the regional office. The regional director assigns the personnel who will provide the training.

Because the health agent is a very important person in the delivery of MCH/FP services to rural areas and in light of the fact that most of the people selected for employment have no background in health education, the training program needs to be expanded so that the health agents can competently carry out their tasks. Therefore, the following are recommended:

1. The training program should be extended to include a three-month supervised field practice, which would immediately follow the three-month course of classroom study. This would involve their observation of proper techniques and their own application of the techniques under supervision before being allowed to work on their own.
2. The course of formal study needs some changes.
 - a. The list of drugs carried by the health agents should be revised to include the following:

--aspirin for adults and children;

--cough syrup;

- chloroquine;
- elixir paregoric;
- bicarbonate of soda;
- serum buccal;
- multi-vitamins with iron and folic acid;
- vitamin A;
- potassium permanganate;
- oral pencillin;
- merthiolate;
- antihistamine (phenergan);
- ophthalmic antibiotic ointment; and,
- resupply of oral contraceptives, cream
condoms.

It is important that a simple and consistent list of drugs be maintained as the drugs to be used provide one of the bases of the training program. The regular resupply of these drugs to the agent in the field after training is essential to the agent's continuing familiarity with and proper use of them.

- b. The presentation of course contents needs to emphasize discussion and questions from students. There needs to be ongoing feedback from the students regarding their comprehension of course content and why they are asked to do what they do.
- c. The course should place greater emphasis on visual aids, first-hand observation, demonstration, etc., as practical aids to understanding. For example, to see microbes under a microscope would help, as would seeing photographs of patients with symptoms of certain diseases. The use of a model of the human body or fold-over picture would help in the discussion of anatomy and physiology.

- d. The course needs to add a section on the principles behind and the methods of family planning.
- e. Maternal protection should include a section on fetal development (with photographs) and on spontaneous and induced abortion.
- f. The discussion of obstacles to the prevention of healthy infants in the infant protection section should include the question of economic means, sanitation and clean water supply.
- g. The nutrition section should include exercises in the examination and analysis of typical diets to judge their adequacy, deficiency and suitability to changes in clients' circumstances. Visits should be made to nutrition rehabilitation centers (CERNS and foyers) and the pediatric wards to see children with nutritional deficiencies to be better able to identify symptoms of malnutrition.
- h. The course should include a section on common accidents, ways to avoid them and treatment for burns, broken limbs, excessive bleeding, etc.
- i. Perhaps the section on transmittable illnesses could be combined with that of illnesses of adults and children.
- j. The community education section should include discussion and role playing on how to approach people in their homes, techniques to use in establishing rapport and acceptance and methodology on how to educate people so that the content is retained. (This involves the use of dialogue throughout, as well as an attitude of respect toward the client.)
- k. The Guide of Work (page 12) needs to be corrected regarding diarrhea in nursing children. Do not suggest the use of baby bottles.
- l. The specific tasks of the agent need to be spelled out in the training. Stronger emphasis needs to be placed on his/her responsibility to make follow-up home visits to clinic patients, where indicated. His/her expanded role (see education recommendation section) in client education in the clinic setting needs to be discussed.
- m. The training should discuss the nature of the supervision the agent will receive on the job and how to utilize this mechanism to improve the quality of his/her work.

3. Periodic review of the basic training should occur.
4. Seminars should be held regularly to provide the agents with additional knowledge and to strengthen areas of their practice which appear weak.

Appendix B

HOUSEHOLD DISTRIBUTION PILOT PROJECT

Appendix B

HOUSEHOLD DISTRIBUTION PILOT PROJECT

The preliminary results of community-based household distribution of contraceptives in rural areas are described below.

Background

Agreement for a pilot project in community-based household distribution of contraceptives was signed by USAID and Haiti's DSPP in 1977.

A. Aims of the Project

1. To determine how strong the demand is for contraceptives in rural Haiti.
2. To determine how much contraceptive use can be increased if access to modern contraceptives is made available on a house-to-house basis by villagers trained as distributors.

B. Sites

There were three separate rural areas selected for pilot-testing. They were Fond Parisien, which has made available family planning services for several years (in some villages since 1966); areas with no family planning services around Saint Marc; and areas with no family planning services around Leogane.

The three areas comprise 17 villages. Each village contains about 400 households (2,000 people), for a total of about 32,000 people in the three study areas.

C. Method

One village resident was selected for each village from several residents trained during a four- to six-week course held in each area. The training course aimed to teach village residents to understand and explain the use of contraceptives (how they work, etc.).

The trained family planning village worker visited each household (about 400) once every four months at the rate of five or six households a day; (s)he explained the correct use of contraceptives (pills, condoms, foam) and left a four-month supply with people willing to accept them.

When making household visits (every four months), the distributors recorded the rates at which modern contraceptives were used, using basic demographic variables.

Based on the comparison of baseline data, data obtained after four months and data obtained after eight months, evaluations were made.

D. Progress to Date

The following results were recorded as of September 1, 1979:

- o Fond Parisien: Began January, 1978; fieldwork completed; preliminary analysis and preliminary data completed (see below).
- o Saint Marc: Began August, 1978; fieldwork completed; analysis in progress.
- o Leogane: Began March, 1979; first round of fieldwork only completed.

E. Preliminary Findings

The following results are based on findings in Fond Parisien only:

- o The percent of women aged 15-44 living in Fond Parisien and using modern contraceptives (pills, condoms, foam, IUD) was as follows:

| | |
|----------------------------------------------|------|
| * Percent before distribution program began: | 3.9 |
| * Percent four months after program began: | 14.1 |
| * Percent eight months after program began: | 14.2 |

F. Preliminary Conclusion

The household distribution pilot project initiated in an area with preexisting, free family planning services increased the rate of users from 4 percent to 14 percent within a period of eight months. (For more details, see Tables 1 and 2.)

Table 1
PERCENT OF WOMEN AGED 15-44 USING A CONTRACEPTIVE
(By Village)*

| <u>Village</u> | <u>ROUND I: (Baseline)</u> | | <u>ROUND II: (4 Months Later)</u> | | <u>ROUND III: (8 Months Later)</u> | |
|-------------------|--------------------------------|----------------|---------------------------------------|----------------|----------------------------------------|----------------|
| | <u>Number</u> | <u>Percent</u> | <u>Number</u> | <u>Percent</u> | <u>Number</u> | <u>Percent</u> |
| Fond Parisien | 33 | 6.2 | 61 | 11.6 | 66 | 12.9 |
| Ganthier | 22 | 4.7 | 68 | 16.4 | 87 | 23.2 |
| Galette Chabon | 13 | 2.9 | 101 | 27.0 | 67 | 17.1 |
| Beauge | 5 | 1.2 | 12 | 3.1 | 13 | 3.6 |
| TOTAL | 73 | 3.9 | 242 | 14.1 | 233 | 14.2 |

* Fond Parisien, Rounds I, II and III, 1978

Table 2

PERCENT OF WOMEN AGED 15-44
USING FOUR MODERN METHODS OF CONTRACEPTION
(By Method)*

| <u>Method</u> | <u>Round I</u> | <u>Round II</u> | <u>Round III</u> |
|---------------|----------------|-----------------|------------------|
| Pills | 2.3 | 6.2 | 7.5 |
| Condoms | 0.4 | 4.4 | 3.2 |
| Foams | 0.2 | 2.9 | 3.0 |
| IUDs | 1.0 | 0.6 | 0.5 |
| ALL METHODS | 3.9 | 14.1 | 14.2 |

* Fond Parisien, Haiti, Rounds I, II and III, 1978

Appendix C

HAITI'S FIVE-YEAR HEALTH PLAN, 1975-1980

Appendix C

HAITI'S FIVE-YEAR HEALTH PLAN, 1975-1980 MCH/FP PROGRAMS, CHAPTER II

Health Policy of the Department of Public Health and Population

A. General Objectives

- o To increase life expectancy to 52 years in 1980. (In 1971, life expectancy was 47.5 years.)
- o To reduce the morbidity and mortality from contagious diseases, malnutrition and perinatal diseases.
- o To focus on the most vulnerable groups: children under 15 years (particularly those under five) and women in the reproductive age groups.

B. Specific Objectives

1. Contagious Diseases

- a. To maintain epidemiological surveillance of small pox and yaws. (Both have been eradicated.)
- b. To reduce morbidity and mortality from tetanus, particularly among the newborn, by anti-tetanus immunization of pregnant women and the most exposed groups and by health education and training of the traditional midwife.
- c. To reduce morbidity and mortality from whooping cough and diphtheria by immunizing the most vulnerable groups (e.g., preschoolers) and by providing prompt medical attention.
- d. To reduce morbidity and mortality from tuberculosis by BCG vaccination of all children under 13 (and by other means).
- e. To reduce morbidity and mortality of children under five by improving diagnostic and treatment facilities, especially rehydration of patients at all levels of service.

- f. To regionalize the health system with referral system from periphery to the center.
- g. To eradicate malaria.

2. Maternal and Child Health Services and Family Planning

- a. To reduce infant mortality is the first priority of MCH policy.
- b. To reduce mortality in the age group.
- c. To reduce maternal mortality.

To carry out these objectives, we must:

- a. Increase the number of deliveries in hospitals.
- b. Register and train all the traditional midwives.
- c. Establish and extend family planning.
- d. Promote the participation of the people (and other actions).

3. Nutrition

- a. To reduce the mortality due to malnutrition in the under-5 age group.
- b. To reduce the significant level of second and third degree malnutrition in the under-5 age group.

To carry out these objectives, we must:

- a. Place a food and nutrition policy in the plan for economic social development.

- b. Manufacture in the country a vegetable melange of high nutritive value at a low price.
- c. Promote education in food and nutrition of health staff and the general population: the staff of institutions, mothers, school children and community leaders.
- d. Establish home and school gardens to change habits.
- e. Develop nutrition rehabilitation services in most of the health facilities.
- f. Decrease the prevalence of nutritional anemias in pregnant women and infants by distributing iron (ferrous sulfate) free for reasonable periods.
- g. Train the personnel in how to carry out these activities.