



International Science and Technology Institute, Inc.

EVALUATION OF KENYA'S
NATIONAL FAMILY WELFARE CENTER PROGRAM
OF IN-SERVICE FAMILY PLANNING TRAINING
FOR ENROLLED COMMUNITY NURSES
AND CLINICAL OFFICERS

2033 M Street, N.W. □ Washington, D.C. 20036 □ (202) 466-7290 □ Cable:ISTIUSA

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AND CLINICAL OFFICERS

by

Judith P. Rooks, CNM, MS, MPH
Grace Mule, KRN, KRM, PHN, DAN/FP

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Produced and Edited by:

Population Technical Assistance Project
International Science and Technology Institute, Inc.
2033 M Street, N.W., Suite 300
Washington, D.C. 20036
Phone: (202) 466-7290
Telex: 275445/TSI UR

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THE TEAM

The evaluation was conducted by Judith P. Rooks, CNM, MS, MPH, with assistance from Grace Mule, KRN, KRM, PHN, DAN/FP. Mrs. Rooks is President of the American College of Nurse-Midwives (the professional association for nurse-midwives in the United States) and is experienced in international maternal and child health and family planning. Mrs. Mule is a Kenyan Registered Nurse-Midwife who has extensive experience in nursing/midwifery service and education with the Kenyan Ministry of Health. Mrs. Rooks conducted the evaluation as an external consultant; Mrs. Mule is a Program Assistant in the Population and Health Division of the USAID Mission to Kenya.

ABBREVIATIONS USED IN REPORT

AMRF	African Medical Research Foundation
BSN	Bachelor of Science in Nursing
CBR	Crude Birth Rate
CO	Clinical Officer
DAN	Diploma in Advanced Nursing
DANIDA	Danish International Development Agency
DMO	District Medical Officer
DPHN	District Public Health Nurse
DPHS	District Public Health Supervisor
ECN	Enrolled Community Nurse
EHV	Enrolled Health Visitor
EM	Enrolled Midwife
EN	Enrolled Nurse
EN/M	Enrolled Nurse/Midwife
FHFE	Family Health Field Educator
FP	Family Planning
FPAK	Family Planning Association of Kenya
GNP	Gross National Product
IMR	Infant Mortality Rate
INTRAH	International Training in Health Program
IPPF	International Planned Parenthood Federation
IUCD	Intrauterine Contraceptive Device
KRM	Kenya Registered Midwife
KRN	Kenya Registered Nurse
KRN/M	Kenya Registered Nurse/Midwife

MCH	Maternal and Child Health
MOH	Ministry of Health
NFWC	National Family Welfare Center
NGO	Non-Governmental Organization
PHN	Public Health Nurse
RHC	Rural Health Center
RHF	Rural Health Facility
RHU	Rural Health Unit
SDP	Service Delivery Point
SIDA	Swedish International Development Agency
TBA	Traditional Birth Attendant
TOT	Training of Tutors
UK-ODA	United Kingdom - Overseas Development Administration
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
WHO	World Health Organization

EXECUTIVE SUMMARY

Introduction

An evaluation was conducted in Kenya during October-November 1984 to assess the appropriateness, effectiveness and impact of a program of in-service clinical family planning (FP) training which is provided by the National Family Welfare Center (NFWC) of the Kenyan Ministry of Health (MOH) for Enrolled Community Nurses (ECNs) and Clinical Officers (COs). The training program is supported by USAID/Kenya through Part B of its Family Planning II Project, No. 615-0193.

The project's purpose is to assist the Government of Kenya (GOK) to reduce the country's rapid rate of population growth by increasing the MOH's ability to provide safe and effective FP services. The MOH has an extensive and growing network of rural health facilities (RHF's) which provide maternal and child health (MCH) services as well as primary curative care. The MOH's goal is to make FP services available during all regular clinic hours as an integrated component of MCH care. ECNs provide most of the MCH care in the rural health facilities. COs provide curative care, supervise the ECNs, and administer the Rural Health Centers (RHCs).

The evaluation was based on information obtained by reviewing existing written materials, including curricular guides and handouts used in the NFWC training program; interviewing individuals, including MOH personnel, tutors and students of the NFWC training program and already-trained ECNs and COs and their supervisors; visiting and observing three of the six decentralized NFWC training centers; visiting and observing rural health service facilities in three parts of the country; and observing trained ECNs providing FP services to patients.

Major Findings and Conclusions

Currently only half of the RHF's offer FP services. Although the number which offer these services has increased by 47 percent during the past five years, national statistics do not show a significant increase in the use of the FP services. The health system does, however, reach a large and growing proportion of the population with other MCH services: at least 65 percent of pregnant women receive prenatal care and 49 percent of children have been immunized. In addition, the MOH system has many strengths, including well-trained nursing personnel, an increasing focus on community outreach, and a recent policy of decentralization. Although some of the MOH's integrated MCH/FP facilities serve as few as one FP client for every 20 or 30 pregnant patients, others, including at least one entire district, serve approximately one new FP client for every three pregnant patients. The fact that some MCH/FP facilities can provide this level of FP service shows that the MOH has the potential to meet the FP needs of a significant proportion of Kenyan women.

Despite the desire of most Kenyans for a large family, some women, including many who are relatively young and low-parity, are interested in spacing their children. Intrauterine contraceptive devices (IUCDs), especially those containing copper, are growing in popularity. In some parts of the country, loops have a reputation for being unreliable and some women specifically request

a copper-bearing IUCD. Two current problems make it difficult for the trained nurses to provide an acceptable FP method to young women who want and request this method of contraception. The first is an inadequate supply of copper-bearing IUCDs and the second is that the MOH has issued new rules which prohibit the nurses from giving IUCDs to women with less than three children or giving combined oral contraceptives to lactating women. The MOH is concerned about protecting the future fertility of low-parity women and wants to promote breastfeeding. The combination of these two rules, however, means that women who are breastfeeding their first or second child can use neither pills nor IUCDs. The MOH has ordered lowdose progestin-only pills to meet this need, but they have not arrived yet, and the nurses in the field have not been trained to prescribe them safely.

The NFWC's output of trained ECNs has been close to the 300 per year which was scheduled in the original project plan. However, the NFWC has not developed the capacity to train 90 (the projected number) of COs per year; only 60 (or 22 percent of the 270 planned for the three-year period) have been trained.

The ECNs are appropriate recipients of NFWC training because they are the cadre which actually provides MCH/FP services. The only constraint to expansion of ECN training is the anticipated problem of providing adequate opportunities for observation and practice of IUCD insertions. While ECNs trained through NFWC are safe, clinically competent FP practitioners, they tend to wait to introduce the issue of FP until after a child is born, rather than during the pre-natal period when the largest percentage of women attend clinics. Technically, the only major gap in the ECNs' knowledge is in the area of prescribing low-dose progestin-only pills to breastfeeding women.

On the other hand, COs do not actually provide FP methods. Furthermore, the NFWC's decision to train COs in the same classes as the Registered Nurse-Midwives (KRN/Ms) has resulted in lost capacity to train this latter cadre. Since the KRN/Ms serve as nursing school tutors and supervise the rural MCH/FP services, they provide a vital link in the MOH plan to make FP an integrated component of MCH care.

The NFWC tutors are well prepared and do a remarkably good job. The major deficiency of the training program is the lack of a system to keep the tutors current in the technical aspects of FP. Some of what they are teaching is out-of-date. There is an inadequate supply of current technical FP references within the MOH system as a whole; those references which do exist are rarely distributed to the nursing tutors; and the tutors may not fully utilize some resources which are potentially available to them. In addition the MOH relies on seminars as the major means to increase the knowledge of its staff, and the nurses often do not get the information they need.

Major Recommendations

1. USAID should continue to support development of the MOH's system of integrated MCH/FP services.
2. Research should be conducted to learn why some MCH/FP services are so much more successful than others at providing FP.

3. The training of ECNs should be continued and if possible increased. The importance of introducing women to information about FP during prenatal care should be emphasized.
4. COs should not be trained in clinical FP, but should have a new, shorter course designed to educate men about the need for FP and how to diagnose and treat FP method complications.
5. The NFWC should develop written guidelines on the safe use of progestin-only pills by women with lactational amenorrhea. This material should be included in the NFWC course and should also be sent out to the RHF's along with the progestin-only pills when they arrive.
6. Until the progestin-only pills arrive, the MOH should consider amending its rule to allow use of low-estrogen pills beginning at 6 months post-partum.
7. The NFWC should convene an annual seminar/workshop for all of their tutors to include content on training methodology, current technical information, and time to update their lesson plans based on the new information.
8. Whenever the MOH distributes written materials relevant to MCH/FP, copies should be addressed specifically to the NFWC tutors and other nurses who need to be informed.
9. The NFWC should consider going forward with its original plan to publish and distribute a periodic newsletter.

I. INTRODUCTION

I.1 Project Background

This report communicates findings, conclusions and recommendations based on an evaluation conducted in Kenya from October 22 - November 10, 1984, to assess the in-service FP training which is provided to Enrolled Community Nurses (ECNs) and Clinical Officers (COs) through the Training Department of the National Family Welfare Center (NFWC), a component of the Kenyan Ministry of Health (MOH). This training is conducted as part of the Integrated Rural Health/Family Planning (IRH/FP) Project, a six-year effort which is being jointly financed by the Government of Kenya, the World Bank, the Swedish International Development Agency (SIDA), the Danish International Development Agency (DANIDA), United States Agency for International Development (USAID), the United Nations Children's Fund (UNICEF), United Kingdom-Overseas Development Administration (UK-ODA) and the United Nations Fund for Population Activities (UNFPA). The IRH/FP Program has two major components, Part A, which is an interagency program for information and education on population and development in Kenya, and Part B, which includes a range of inputs directed towards improving the health and FP services provided to Kenyans who live in rural areas. USAID contributes to Part B of the IRH/FP program by supporting the in-service FP training of ECNs and COs.

The IRH/FP Program was planned for implementation during a two-phase six-year period -- the first phase from July 1982 through June 1985 and the second from July 1985 through June 1988. This is a routine interim evaluation. An extensive appraisal of the complete IRH/FP Program (Part A and Part B) is planned for the first half of 1985. The total planned budget for the first three years of Part B (Rural Health Services Component) of the IRH/FP Program amounted to U.S. \$49.7 million. The USAID contribution was to be U.S. \$1.0 million, or 2 percent.

I.2 Scope of Work

The Scope of Work called for a detailed review of course training content, materials, trainers' skills, selection and assignment of trainees, trainees' own course evaluations, NFWC management of training and budget, adherence to planned schedules, and is based on USAID's POP/FP sector assessment exercise. The consultant expanded the scope of work to include training of Kenyan Registered Nurse/Midwives/Public Health Nurses (KRN/M/PHN) in view of the integral part they play in FP training.

I.3 Methodology

The evaluation was based on information obtained by:

- Reviewing existing written materials, especially USAID documents, reports from the MOH and other agencies of the Government of Kenya (GOK), and curricular guides and teaching/learning materials used in the NFWC training program;

- Interviewing individuals, especially MOH personnel responsible for administration and policy leadership of the NFWC and the IRH/FP Project, members of the administrative and tutorial staff of the NFWC Training Department; students currently being trained in the NFWC program; already-trained ECNs and COs working in rural health facilities; physicians, nurses and clinical officers responsible for administering rural health services and/or supervising trained ECNs and COs serving in rural areas; patients waiting to receive FP services; USAID personnel; and others with relevant knowledge and experience;
- Visiting and observing three of the six decentralized NFWC training centers (in Nyeri, Mombasa, and Kisumu) which are part of the NFWC in-service FP training program;
- Visiting and observing rural health service and training facilities in the same three areas, including provincial and district hospitals and their associated MCH/FP out-patient clinic services, ECN training schools, one rural health unit training/demonstration school, rural health centers and dispensaries;
- Attending parts of two continuing education seminars on MCH subjects being conducted by the MOH in provincial centers; and
- Observing trained ECNs provide FP services to patients.

I.4 Constraints

Although three regions of the country were visited (in addition to Nairobi), time and transportation constraints did not allow visitation to health centers and dispensaries located far from a provincial or district hospital. Such facilities, located at considerable traveling time from the nearest supervisory and logistical support, are likely to have greater problems than facilities closer to the district medical and administrative center. This evaluation may be biased because of the consultants' inability to observe a more representative sample of rural health facilities.

I.5 Demographic Background

I.5.1 Fertility and Population Growth

The current population of Kenya is estimated to be about 19.5 million; 1/ approximately 722,000 Kenyans are born each year. Health has improved remarkably in the last 30 years, with sharp reductions in both the crude death rate and infant mortality rate (IMR) which declined from 184 infant deaths per 1000 live births in 1948, to 119 deaths per 1000 births in 1969, and 87-92 deaths per 1000 births in 1979. 2/, 3/ The IMR for 1984 is estimated to be in the range of 83-85/1000 births. 4/ Kenya is one of only 8 African countries (of a total of 52) with an IMR below 100. 2/ The crude birth rate (CBR), which was stable at about 50 births per 1000 population through the 1950s and 1960s, increased during the 1970s to a CBR of 53 in 1979. 2/ The combination of rising fertility and

falling mortality has resulted in an extremely high population growth rate -- currently more than 4 percent per year 5/ and among the highest for any nation in the world. Because the inflation-adjusted gross national product (GNP) increased by 6-7 percent per year from 1964 to 1973, the standard of living rose despite the rapidly increasing population. However, the growth of the GNP has slowed since 1973, and the population is now increasing faster than the nation's productive capacity. The GOK's goals for 1988 include reducing the population growth rate to 3.5 percent/year and reducing the infant mortality rate to 77.3/1000 live births. 6/

I.5.2 Desired Family Size

The high and increasing fertility of Kenyan families is thought to be related not only to increased health status, with reductions in infertility and survival of more females to and throughout the child-bearing ages, but also to social changes which have caused a decline in traditional practices such as prolonged intensive breastfeeding, polygamy, and proscription of marital sex during an extended period of time after the wife has given birth. As a result births are now spaced closer together than they were a decade ago.

As throughout Sub-Saharan Africa, the Kenyan people place an extremely high value on children and want large families. The status of both women and men is highly dependent on having many children and infertility is greatly feared. Surveys conducted in the 1960s and 1970s indicated that the average Kenyan family's desire for children kept pace with their increasing fertility potential. For example, a 1967 survey showed that the average Kenyan woman then wanted to have six children; a similar but later survey indicated that by 1977-78 the average woman in Kenya wanted to have a total of eight living children. 4/ Because of dispersion of the responsibility for child rearing among the extended family, the economic value of children's contribution to farming and care of farm animals, and parents' need for children to care for them in old age, having many children has been perceived as an economic asset.

However, other social and economic forces may now also be coming into play -- exposure to the modernizing influences of education (the ratio of boys to girls in the primary schools has been reduced from 167:100 in 1966 to 112:100 in 1983), 1/ urbanization, women's participation in paid employment, 5/ a trend away from extended-family responsibility for child care, 4/ recognition of the need to expend resources on children (especially for education) in order to insure their future economic well-being, and economic hardships associated with reduction of the GNP relative to the rapid population growth. Whether, and to what extent, these forces have begun to affect the decisions of individual men, women and couples regarding desirable timing, spacing and total number of children remains to be seen and clearly varies between different parts of the country and subgroupings of the population. Eventually and ultimately these factors will come increasingly into play. As surveys in Kenya have shown, it is the younger generation which appears most favorably disposed to a smaller completed family size. 4/

I.5.3 Health and Nutrition

Although the Kenyan IMR has fallen dramatically and is below that of most other developing countries, it is still four times higher than the average IMR for the more fully developed countries.

In 1972 the MOH conducted a study to determine the major health problems affecting the rural population. They were family health problems, communicable diseases, conditions caused by poor environmental sanitation, and problems related to malnutrition. 7/ MOH data for 1980 showed that the major causes of morbidity and mortality in the country are (1) respiratory diseases (pneumonia, tuberculosis, bronchitis and whooping cough), (2) parasitic and infectious diseases (malaria, schistosomiasis, sleeping sickness, and filariasis), and (3) intestinal and diarrheal diseases associated with poor environmental sanitation. Together these three groups accounted for nearly 70 percent of reported deaths and more than 60 percent of treated disease.

Malnutrition is a contributing cause for one-third of childhood deaths; 20 percent of deaths of children under age 5 are due to diseases which could have been prevented by use of vaccines. 6/ One in eight child deaths is due to diarrhea. 8/ A 1977 survey by the Kenya Central Bureau of Statistics indicated that, although the incidence of severe protein/calorie malnutrition was relatively low for the country as a whole, about one-third of rural children were affected by mild or moderate protein/calorie malnutrition. 2/ The recent (1983-84) drought has caused food shortages and food price-inflation, exacerbating the problem of malnutrition.

I.5.4 Rural Living Conditions

As of 1979, 86 percent of the population of Kenya lived in rural areas in which the majority of people relied on hoe cultivation, pedestrian transport, and individual portage of fuel and water to meet basic needs. Only 15 percent of the rural population had piped water and 38 percent had no sanitation facilities. 3/ Sharp contrasts in geography, climate and soil conditions divide Kenya into four zones: 64 percent of Kenya's rural population live in the highlands above an altitude of 1250m, and enjoy a pleasant climate (not conducive to parasitic disease) and fertile soil. Twelve percent of the rural population live in areas between 500 and 1250m altitude, which are referred to as the marginal zone. The arid zone, including most of the northern and eastern parts of Kenya, contains the largest land mass but is sparsely populated, accounting for less than 8 percent of the rural population. The arid areas are low, hot, dry and flat, covered mainly with desert and bushed grasslands. The remaining 16 percent of the rural population live in the hot, humid zones along the coast and around Lake Victoria. Vegetation in the hot, humid areas varies from swamps and highly cultivated areas to bushland and forest. Living conditions, health status and population density vary greatly between these regions. 2/ In addition, the Kenya World Fertility Survey revealed wide differences in fertility between urban and rural areas. Women in the two main metropolitan areas of Nairobi and Mombasa have a total fertility rate which is less than half that of rural women, while the fertility of women in non-metropolitan urbanized areas is intermediate. 2/

I.5.5 Family Planning Policy

Family planning was introduced to Kenya by Dr. Samson Nathan Mwathi, a Kenyan physician who learned about it during a period of study in England and brought diaphragms with him when he returned to Kenya in 1950. As Dr. Mwathi was employed by the GOK, he requested the Government to give him a room in which to practice FP. This was refused and the diaphragms were given to private physicians whose FP services were available only to white women.

In 1956 the Family Planning Association of Kenya (FPAK) was founded with leadership from Dr. Mwathi and others. In 1962 FPAK became a member of the International Planned Parenthood Federation (IPPF) and began to receive international assistance. By 1965 FPAK operated 14 clinics in Nairobi and 7 in other areas of the country. 9/

In 1964 the Ministry of Economic Planning and Development (now the Ministry of Finance and Economic Planning) invited The Population Council to study Kenya's economic development in relation to population growth. The Population Council reported that, with a crude birth rate of 50 and crude death rate of 17, the rate of natural increase was 3.3 percent per year and, if unchecked, the country's population would double in the following 21 years. In response to the Population Council's report, in 1967 the GOK adopted a policy of providing FP services to all people of reproductive age and directed the MOH to establish FP services within its Maternal and Child Health (MCH) Program. Kenya thus became the first country in Sub-Saharan Africa to establish a national FP policy and service program. 10/ Kenyan leaders have continued to express concern about the country's high rate of population growth and its adverse impact on national development. The media give frequent and balanced coverage to population/FP themes and there is an emerging dialogue at all levels of society about the pros and cons of FP.

II. HEALTH AND FAMILY PLANNING SERVICES

II.1 Rural Health Services

II.1.1 Coverage

As of 1982, Kenya had a total of 1,516 6/ rural health facilities (RHF) (health centers and dispensaries) or one for every 11,000 people. 2/ However, 57 percent of all households in Kenya are located 4 or more kilometers from the nearest health facility; 13 percent are within 3 kilometers, and only about 30 percent are within the easy reach of two kilometers or less. Half of the existing RHF are in disrepair. 6/

II.1.2 Government Facilities

II.1.2.1 Hospitals. The GOK is administered through 8 provinces and 41 districts. There is a government hospital in each province, and all districts also have a hospital except where there is a provincial hospital. There are a few hospitals in sub-districts, but they usually have limited facilities. Physicians practice mainly in hospitals.

II.1.2.2 Rural Health Facilities. RHF consist of Rural Health Centers (RHCs) and dispensaries.

° RHCs have some in-patient beds (especially maternity) as well as out-patient services and have some staff on duty around the clock. RHCs are run by resident Clinical Officers (COs), who also provide curative care to many out-patients and a few in-patients. Some large RHCs may have more than one CO. Four or more Enrolled Community Nurses (ECNs) provide MCH/FP out-patient services including prenatal care, childcare, immunizations, and FP (if they have been trained for it), some outpatient curative care, in-patient midwifery services, and nursing care of sick patients. A public health technician advises and assists the community regarding environmental problems and sanitation. At least two Family Health Field Educators (FHFEs) report to the health center but work mainly in the community. In addition there are assistants, a statistical clerk and usually a laboratory technician and a driver with a transport vehicle.

° Dispensaries offer only ambulatory care, are open only during regular working hours, and may be staffed with only one ECN and an assistant, and, in rare instances, a statistical clerk.

II.1.3 Administration

Until 1970, the RHF were the responsibility of local authorities. 6/ In 1970, the MOH centralized the system and assumed responsibility for supporting, staffing and administering the RHF. In 1983, however, the GOK reinstated a policy of decentralized management. Most ministries are now represented at the district level and frequently can make plans and expend their budgets without

approval from the central ministries. The major responsibility for administering the RHF's now resides in the districts. Each district has a District Health Team, consisting of the District Medical Officer (DMO), Public Health Officer, Public Health Nurse (DPHN), Hospital Secretary, Pharmacist, Hospital Matron, Drug Inspector, Health Education Officer, District Clinical Officer and Nutritionist, with responsibility for assuring the quality of services provided by the RHF's. The DPHN supervises the MCH/FP services.

In 1972 the MOH introduced the concept of the Rural Health Unit (RHU), a geographically defined administrative unit within the district. The country's 40 districts (excluding Nairobi) were divided into 254 RHUs, each serving a population of between 50,000 - 70,000 people. According to the MOH's plan, one health facility (hospital or RHC) in each RHU should be designated as the RHU headquarters. Key staff of the RHU headquarters health facility (a CO, 4 ECNs, 2 FHFES, a Public Health Technician and a statistical clerk) are supposed to provide technical supervision and support to the staff of the other RHCs and dispensaries in their RHU.

Six Rural Health Training Centers were put into operation in about 1978-79 to provide "team training" for the 9-person leadership team from the RHU headquarters staff. The whole team attends the 13-week training together. The training focuses on building skills in problem-solving, communication-teaching-motivation, and community diagnosis; orientating the team to the national health care system/strategy; and updating team members in their individual technical specialties. As part of the training each team makes several 2 or 3 day trips to a community to plan and conduct a survey to assess the community's resources, problems and needs, and, after analysis of the data, to report their findings and work with community leaders to plan ways to improve the community's health. Teams from 30 percent of the RHUs had been trained by the end of 1982. If all training centers are operating according to schedule, approximately 60 percent of the RHU teams should have been trained by now. Although there are time and transportation problems, trained RHU leadership teams try to make regular visits to the dispensaries they back up to give supervision and bring supplies.

Overall, this history reflects a health system which is dynamic and progressive and in which changes are constantly being made to improve the level of service.

II.1.4 Non-Governmental Providers

Although the MOH is the main provider of modern health services in the rural areas, non-governmental organizations (NGOs) also play an important role, currently accounting for about 30 percent of the total health care provided to rural people. Both Protestant and Catholic Christian churches have provided health services in rural Kenya for eighty years and have established a good reputation with the people. In the most remote areas, NGOs (primarily mission facilities) provide up to 70 percent of the limited available health care. 2/ All government health services are free of charge; most NGO/mission services are provided for low/nominal charges. NGOs are included in the MOH's IRH/FP Project and a subsidy amounting to about 4 percent of the MOH's budget is allocated each year to NGOs. 2/

II.2 Family Planning Services

II.2.1 Coverage

Service Delivery Points. An important goal of the IRH/FP program is to increase the number of RHF's which offer FP services. These services include prenatal and FP care for the mother and immunizations and other care for children up to age six. RHF's where all of these services are available throughout every regular clinic day are referred to as Service Delivery Points (SDPs).

Although the MOH has been relatively successful in expanding the number of SDPs, at present only half of the RHF's offer comprehensive FP care. The current total (742 SDPs as of October 18, 1984), however, represents a 47 percent increase in approximately five years (from 505 SDPs in 1979). It comes close to the MOH goal for 1983 -- 820 SDPs -- representing 91 percent of that target.

Community Outreach. To supplement the SDP family health services, the Government has instituted a program of community outreach which includes the training of community workers to dispense oral contraceptives and other health commodities and of Traditional Birth Attendants (TBAs) to perform safer home deliveries and increase referrals (see Appendix B). Decentralization and the training of Rural Health Teams (see II.1.3) represent other efforts to reach people not currently served by the health system.

II.2.2 Utilization

II.2.2.1 MCH Services. The health system reaches a large and growing proportion of the population with MCH services. In 1978, it was estimated that 65 percent of pregnant women made at least one prenatal care visit to a health facility. Between 20 and 30 percent of Kenyan babies are delivered in a health facility.* Approximately half of all infants (49%) are now receiving a full schedule of vaccinations, requiring at least three clinic visits, 16/ and a concentrated effort is being made to increase the percentage of fully immunized children to 75 percent by 1986. 5/ An immunization coverage survey conducted in Kirinyaga District in April 1984 showed that 78 percent of children in that area were fully immunized; 5/ more than that proportion had surely received at least some immunizations.

II.2.2.2 Family Planning Services. Despite the growing number of SDPs and increasing utilization of other MCH services, there has not been significant growth in the number of women initiating contraception in MOH facilities. The Kenya Fertility Survey showed that only 7 percent of couples were using an FP method in 1978. The previous year, 1977, marked the high point for new acceptance of an FP method, with registration of 71,376 new clients. Although there has been an upward trend in the 1980s (49,487 new patients in 1980, 53,713 in 1981,

* Although the MOH is making an effort to get women to come for prenatal care, they are not trying to increase the proportion of babies born in health facilities. Instead they plan to provide better training for TBAs (see II.2.1).

and 59,343 in 1983), the highest recent figure is still about 12,000 new clients less than the record set in 1977. On the other hand, the current figures are better than those for the mid-1970s (40,600 initiators in 1974 and 38,137 in 1975).*

Despite the discouraging statistics, the Team found that many women who attend the MOH's integrated MCH/FP facilities are interested in FP. There appeared to be small demand for FP from young, unmarried girls who are in school and want to avoid their first pregnancies and among some older women who already have as many children as they want and seek to avoid the physical stresses and risks of bearing another high-parity child. But by far the biggest demand appeared to be for spacing children, with as much or more interest in spacing among younger, lowparity mothers as among women wanting to space between higher-parity births. The desire for FP seems greater among younger women who are also becoming involved in other social changes.

The Team also found a huge discrepancy in utilization of FP services among different facilities. It recorded data from the MCH/FP log books on immunization, prenatal care and FP. The goal was to ascertain the ratios between the number of visits for immunizations and for prenatal care to visits for FP** The Team's findings are summarized in Table II.2.2.2 on the following page.

Clearly there are striking differences in utilization of FP by women attending these health facilities. Whereas there are approximately three prenatal patients for every new FP client at the MCH/FP facilities in Nyeri District and at the Mombasa Provincial Hospital MCH/FP clinic, there are 20 or more prenatal patients for every new FP client at Nyanza Hospital clinic and at the Ahero Health Center. What is not clear is whether these differences are due to the capacity of the clinics or the motivation of the clients.

* The Team could not ascertain the source of these figures. Statistics on use of FP services are gathered two ways: (i) the NFWC compiles and analyzes data on FP visits forwarded directly by SDPs; and (ii) the DPHN compiles figures based on daily logs from RHF's detailing all MCH activities. The Team was not certain which of these two sources was used in compiling new acceptor statistics.

** Theoretically, if every pregnant woman who received antenatal care in a MCH/FP facility later became a FP patient in the same facility, then the ratio between new antenatal and new FP patients would be about 1.0. Likewise if at the same time that every new infant was started on a course of immunizations, the infant's mother also started to use a contraceptive method, then the ratio between new child immunization patients and new FP patients would be about 1.0. Likewise, if a large number of nulliparous women came for FP services the ratio could be greater than 1.0. For various reasons it was not possible for the Team to get all of the data from each site visited.

Table II.2.2.2: SELECTED DATA ON INITIAL VISITS FOR MCH/FP SERVICES: A SAMPLE OF HEALTH FACILITIES

Specific Facility and Period of Time	First Visits for Specific Services			Ratio of 1st FP Visits to 1st Visits for Other MCH Care	
	Immuni- zations	Prenatal Care	Family Planning	Immuni- zations	Prenatal

Mombasa Provincial Hospital MCH/FP Clinic					
Sept. 1983	104	155	78	.78	.50
Sept. 1984	146	231	63	.43	.27
Nyeri District					
All of 1983	21,044	15,120	3,974	.19	.26
Aug. 1984		1,726	555		.32
Sept. 1984		1,516	627		.41
New Nyanza Hospital MCH/FP Clinic					
Aug. 1984	494	927	44	.09	.05
Ahero Health Center					
May 1984		205	6		.03
Railway Dispensary					
Oct. 1984	140		7		.05

II.2.3 Contraceptive Preferences

The use of IUCDs by FP clients in MOH clinics increased steadily, from 10 percent in 1974 and 1975, to 23 percent in 1982, 17/ probably because their use does not require such frequent visits to (often far-distant) health facilities. Data from the patient logs of some of the RHF's visited by the evaluation team indicate that the proportion of clients choosing IUCDs has continued to grow, so that IUCDs now represent at least a quarter of total contraceptive use. In addition, women often specifically request the Nova I copper bearing IUCDs in preference to the loops, which seem to have developed a local reputation for being unreliable. Table II.2.3 provides additional information on contraceptive preferences.

Table II.2.3: NEW FAMILY PLANNING CLIENTS BY METHOD INITIATED AT SELECTED MOH SERVICE DELIVERY POINTS

<u>Specific Facility and Time Period</u>	<u>Contraceptive Methods Initiated by New Family Planning Clients, by Percent of the Total Number of New FP Clients*</u>				
	<u>Pills</u>	<u>IUCDS</u>	<u>Depo Provera</u>	<u>Other</u>	<u># New Clients</u>
Mombasa Provincial Hospital					
Sept. 1983	24%	40%	6%	33%	78
Sept. 1984	35%	46%	30%	17%	63
Nyeri District					
All of 1983	63%	25%	2%	10%	21,000
Sept. 1983	50%	28%	0.4%	24%	555
Sept. 1984	44%	25%	2%	29%	627
Kisumu Provincial Hospital					
All of 1983		46%			888
Railway Disp.					
Sept. 1984		67%			12
Oct. 1984		71%			7
Ahero Health Center					
July-Sept. '84		28%			54

* In some cases the percentages total more than 100 percent because some individual clients may initiate more than one method during the time period, either through concurrent or sequential use.

II.2.4 Constraints

Among the major constraints to greater utilization of FP by Kenyan couples are their desire for large families and ineffective dissemination of knowledge about the benefits of spacing children. The evaluation team certainly saw some RHF's in which an ECN trained to provide FP was available but there was little demand for FP services. On the other hand, the team also saw several facilities in which women who wanted and requested a FP method left the clinic without receiving assistance. This discrepancy suggests that service delivery problems may be an important factor in the low new-acceptor rate. The team noted a variety of inhibiting factors including inadequate public education at the center; a weak system to keep health personnel up-to-date on new developments in contraceptive technology; lack of the contraceptive supplies requested; and confusion regarding regulations governing the prescribing of contraceptives.

II.2.4.1 Incomplete Implementation of the "Integrated MCH" Concept. The concept of service in the IRH/FP program is that a pregnant or postpartum woman should be able to receive prenatal or FP care for herself and immunizations and other care for her children up to age six during one visit to the clinic and, theoretically, by seeing just one ECN. The goal is to save the client's time by eliminating the wait involved in seeing two separate clinicians and to improve the flow of patients through the clinic. This "one-stop" format was introduced in 1982-1983 and there has not yet been time to implement it throughout the entire country.

According to the Team's observation, this one-stop "integrated MCH" format is rarely achieved. While all of the key SDP services (prenatal and postpartum care, well-child care, immunizations, and FP) were available at the RHF's visited, and while women attending those facilities could get all services during the same clinic visit, FP was typically provided in a separate room. Therefore women who wanted FP usually had two waits and had to see two different ECNs. FP thus remains a separate rather than an integral part of a woman's normal care. In addition, the woman's desire for FP, which she may consider a very private matter, becomes known to all the other people in the waiting room when she enters a room specified for FP.

II.2.4.2 Public Education. The centers could do a better job in educating the public about FP. The use of posters is particularly inappropriate. Although most facilities have at least one poster or sign related to the subject of FP, often these are placed in the room for patients who have already decided to use a FP method. In addition, the posters are not targeted to mothers. Instead, of the two types observed, one was directed towards men and the other toward unmarried teenage school girls.

In addition, lectures on FP seem to be provided in a somewhat haphazard manner. Lectures on a variety of health education topics are given early each morning to patients sitting on the benches in the waiting area of each RHC center. Those who come late miss the lecture. The subjects vary, with child spacing the topic on unannounced occasions. Different RHC staff take turns giving the lecture. The ECN who provides FP service in one RHC said that she could tell when the lecture had been on child spacing, because she had more requests for FP on those days.

II.2.4.3 Continuing Education for Health Personnel. To keep field workers abreast of new information on health and FP issues, the MOH uses two approaches: (i) circulars, which contain new policies or rules on specific subjects, but which usually are kept by the physicians and rarely if ever are distributed to the ECNs who actually provide patient care (see II.2.3.4), and (ii) seminars. Although there are frequent seminars, usually organized by a department of the central MOH, the District Health Team, or an RHC, ECNs are rarely if ever invited. Instead, the DPHN or the CO may attend. They in turn are expected to pass on what they learn to lower echelon staff. In fact, even DPHNs and COs very seldom go to these seminars and it is probable that if they actually attempt to relay the information to the ECN, it has become very diluted. In short, the chance that any one ECN would be exposed to new information through seminars is relatively slight.

In addition, although COs are supplied with a diagnosis and treatment manual, there is no reference material for ECNs and thus no way for them to refresh their memories regarding the material they were given during training. The only written material for staff which the Team consistently observed was a wall chart outlining the schedule for childhood immunizations.

Originally, the NFWC had planned to distribute a periodic newsletter for all staff involved in the MOH system of integrated MCH/FP services and training. In fact, only one issue was produced, with lack of paper the reason for discontinuation of the effort thereafter. However, if the newsletter were to be re-instituted it might help to fill the need for periodic information to keep staff up-to-date on recent developments in FP.

II.2.4.4 Contraceptive Supplies. A chronic problem is shortage of IUCDS* and the sterile gloves and sanitary napkins needed for IUCD insertion. On the other hand, the Team found an adequate supply of oral contraceptives in all RHF's visited. Another supply problem (possibly a cause of the loops' growing reputation for unreliability - see II.2.3) is the lack in some RHF's of uterine sounds showing metric measurements. The nurses have been taught to select the proper sized loop based on the length of the woman's intrauterine space in centimeters. The only uterine sounds available in some RHF's are measured in inches. Although resourceful nurses can solve this problem by converting the inch measurement into centimeters, lack of metric intrauterine sounds could cause errors in selecting the correct loop size, thereby causing the contraceptive devices to be less effective or to be completely or partially expelled.

II.2.4.5 MOH Regulations. A further problem for nurses is a set of new rules issued by the MOH (see II.2.3.3). Although the rules have a sound rationale, they are making it very difficult for nurses to provide FP assistance to breastfeeding mothers who wish to delay the birth of the next child. Ironically, these are the very women who seem most interested in spacing their children. The rules

* A recent shipment was distributed without expiration dates on the individual pre-sterilized packages, rendering them unusable.

have been promulgated through circulars which have not been adequately distributed. The Team found that some nurses know the rules; others had heard rumors; and still others knew nothing about them. The regulations are:

- because of increased risk of pelvic infection resulting in tubal occlusions, IUCDs cannot be used by women with less than three living children;
- because oral contraceptives containing estrogen decrease milk production in some breastfeeding women, combined oral contraceptives cannot be supplied to any woman who is breastfeeding, regardless of the age of her baby;
- because of fear that Depo-provera can cause permanent infertility, this method cannot be used by women with less than 4 or 5 living children.

At this point, nurses wishing to provide FP assistance to breastfeeding mothers with three or less children can offer only condoms or foam, methods unacceptable to most men. Another problem with the rules is that when women are told that they cannot use pills while breastfeeding, some of them decide to stop breastfeeding. This, of course, contravenes the goal of the regulation which is to encourage breastfeeding.

The evaluation Team was told that the MOH has recently ordered low-dose progestin-only pills to meet the need for an effective contraceptive for low-parity breastfeeding mothers. Because the NFWC-FP course does not contain adequate information on this method, the nurses currently providing FP in the rural SDPs are not equipped to dispense these pills safely.

III. HEALTH CARE/FAMILY PLANNING WORKERS

III.1 Categories

Four categories of health workers are involved directly or indirectly with providing MCH/FP services in rural areas. These include (i) nurses and midwives; (ii) clinical officers (COs); (iii) Family Health Field Educators (FHFEs) and Community Health Workers; and (iv) Traditional Birth Attendants (TBAs). This report focuses on the two categories of nurses who are together responsible for most FP activities in Kenya (ECNs and KRN/M/PHNs) and on the COs. Enrolled Community Nurses (ECNs) have prime responsibility for providing FP advice and supplies in RHCs. Their training is fairly comprehensive and prepares them adequately for these tasks. Registered Nurses with additional training in midwifery and public health (KRN/M/PHNs) are at the top of the nursing hierarchy; they typically serve as nursing school tutors and supervise rural FP activities at the district level. COs are in charge of RHCs and by virtue of this position are responsible for the work of the ECNs. Information on the other categories of rural health workers is contained in Appendix B. A summary of their involvement in FP activities is provided in Section II.2.1.

III.1.1 Nurses and Midwives

III.1.1.1 Nursing Council. A 1949 Act of the Parliament of Kenya provides for the training, registration and enrollment of nurses and midwives and regulates nursing practice. The Nursing Council is the body charged with responsibility for establishing nursing schools, controlling the nursing curriculae, supervising admission of nursing students, conducting the national examinations by which nurses qualify for registration or enrollment, and in general maintaining and improving the standards of the nursing profession. Individual nursing schools, whether operated by the MOH or an NGO, develop curricula based on guidelines provided by the Nursing Council covering the syllabus, clinical experience, and assessment of the students.

In general, the Nursing Council has developed a sound and comprehensive system of basic nursing/midwifery education. It is difficult to determine the actual extent and scheduling of FP content and examinations because of the integrated format of the curricula and the nature of the tests, which require essay-type descriptions of nursing management of hypothetical situations. The Nursing Council claims that FP is "integrated throughout" each of the basic nursing and midwifery curricula and examinations. The Team's opinion was that FP content and clinical experience at the basic level is fairly limited but noted that in some schools it has recently been increased. As a result, the FP knowledge and skills of nurses already in the field may vary considerably depending on when they were trained. A significant proportion of nursing and midwifery schools in Kenya are operated by the Catholic Church. These offer information on FP to conform with National Nursing Council requirements but no clinical experience. Natural family planning has been added to the Nursing Council syllabus for all students.

There are two levels of nursing/midwifery personnel -- the professional or registered level and a lower enrolled level. Currently 12 years of primary and secondary education are prerequisites for entrance into both registered and

enrolled level nursing schools. Previously, however, only 7 or 8 years of basic education was required for entrance into enrolled level schools and many enrolled nurses currently working in rural facilities entered school when this lower standard was extant. For each level, special post-graduate courses are available in psychiatry, midwifery and public health. About 15 percent of nurses and 5 to 10 percent of midwives are men.

III.1.1.2 Enrolled Community Nurses (ECNs). ECN training covers a 3 1/2 year period and includes midwifery, public health, and diagnosis and treatment of some common conditions. Although all ECN schools are associated with hospitals, ECN students have 6-8 weeks of clinical experience in nearby rural health facilities. Every ECN student is required to conduct at least 30 deliveries under supervision. The Nursing Council expects graduates of current ECN training programs to have a thorough knowledge of FP methods and to be able to interview and counsel women regarding FP and prescribe and manage the use of oral contraception. Although information about IUCD insertion techniques is also given, students are not actually taught to insert IUCDs. With approximately 50 students per class, a very large number of patients choosing to use IUCDs would be required to provide enough clinical learning experience to train the students adequately, and such large numbers of IUCD patients are not available in the clinical learning sites. At one ECN school visited by the evaluation team, the FP content was recently increased, from only 4 classroom hours last year to 24 classroom hours in the current year's curriculum, and the students were learning to prescribe oral contraception. However, at another ECN school the principal did not know how many classroom hours were devoted to FP but she thought it was just an introduction and that graduate ECNs were not expected to be able to prescribe oral contraceptives. The only requirement she enforced was that students go to clinics which provided integrated MCH/FP services and that they observe at least 10 initial and 10 return FP client visits. In general, the emphasis in ECN education is on breadth instead of depth. Most ECNs require some time after graduation to become confident in their judgment and skills. Although they are prepared for roles in the RHF's, it is frequently advisable for them to work in a larger, more closely supervised curative-care setting before going to work in an unsupervised rural dispensary.

III.1.1.3 Kenyan Registered Nurses (KRN's), Kenyan Registered Midwives (KRM's), and Public Health Nurses (PHNs). The basic registered nurses educational program is primarily academic and lasts 3 1/2 years. The emphasis is depth rather than breadth. No special units are offered in either for midwifery or public health. After two years of experience a KRN can go on to take either a one-year midwifery course (for KRN's only) and/or a one-year public health nursing course (also offered only to KRN's). If both are taken, midwifery is usually taken first. The Public Health Nursing course cannot be taken until at least 5 years after graduation as a KRN.

° KRN's: Graduate KRN's are expected to know about all FP methods and to be able to interview, counsel and refer women for FP but are not trained to provide methods on their own.

° KRN/M's: KRN/M's are expected not only to interview and counsel but should also be proficient in prescription and monitoring of oral contraception and are taught to insert IUCDs. At a minimum every KRN/M student is required to observe 3 IUCD insertions and to actually insert at least 6 IUCDs.

° KRN/PHNs: Only 22 PHN students are trained each year. The one-year course includes a 9-week NFWC FP course described in full in Chapter IV. This prepares them to provide most reversible FP methods. The PHN curriculum also includes content in teaching methodology and administration. An alternate route to the designation PHN is a two-year academic program given at the University of Nairobi leading to a Diploma in Advanced Nursing (DAN).

° Combined KRN/KRM/PHN Leadership Cadre: Although no actual degrees are granted, the combination of KRN, KRM, and PHN education is probably approximately equivalent to a Bachelor of Science in Nursing (BSN) degree in the United States. After examination of the curricula, some U.S. schools of nursing have matriculated selected Kenyan nurses with this preparation directly into masters degree programs for which a BSN is ordinarily required. KRNs who have completed all three courses are a select leadership cadre. They are usually employed as nursing tutors or in other key supervisory and administrative roles.

III.1.2 Clinical Officers (COs)

A new 3-year curriculum for training COs (parallel to a physician's assistant in the United States) was begun in 1978. The focus of the CO role is diagnosis and treatment of common diseases and conducting frequently performed diagnostic and therapeutic procedures in support of the physician's curative role. Twelve years of primary and secondary education is required before entrance to the CO school. The majority of COs are men, although some women are also being trained. In addition, prior to the beginning of the three-year CO training program, some enrolled nurses with many years of experience were given a special one-year program of training in curative medicine in order to become COs. The CO course does not include midwifery. Graduates can take additional one-year programs to specialize -- for instance in anesthesia or pediatrics. Although the CO course lacks preparation for supervision and administration, COs are put in charge of the RHCs, which are in turn supervised by the DMO.

III.2 Supply of Health Personnel

All MOH facilities seem to be utilized to and beyond capacity. This is especially true in rural areas, where most of the people but relatively few health professionals live. RHF's often are crowded and MCH/FP outpatients frequently experience long waits. Shortage of trained personnel inhibits expansion of services. Although the number of ECNs graduated each year has increased thanks to MOH efforts, increasing supply of ECNs seems only to keep up with the increasing need associated with the opening of more and more rural health facilities. ECN shortages in rural areas are exacerbated by the need for female nurses to be posted where or near where their husbands work. Because of this problem, the MOH is encouraging admission of more males to the ECN schools. This strategy is apparently working and, although women in some tribes are reluctant to expose the sexual parts of their bodies to male health workers, some patients may think that male nurses/midwives are physicians, and they are generally well accepted. The MOH estimates that there are now approximately 8,000 ECNs. They plan to increase this cadre to 12,000 by 1988.

The numbers of COs and nurses other than ECNs being trained annually is relatively stable. In mid-1981 the MOH estimated that there was a 32 percent shortage of COs and a 35 percent shortage of ECNs to staff rural health facilities. Shortfalls are expected to remain at about the same level through 1985, with a one percent improvement as regards ECNs, due to the rapid increase of ECN schools and enrollments in recent years. ^{2/} Table III.2 provides a summary of the supply of key health workers in the country.

Table III.2: SUPPLY OF KEY HEALTH WORKERS

<u>Category of Health Worker</u>	<u>Number Employed by MOH ^{1/}</u>			<u>Total # in Country in 1979 ^{2/}</u>	<u>Number Graduated in 1982</u>
	<u>1972</u>	<u>1982</u>	<u>% Incr. '72-'82</u>		
Physicians	350	835	+139%	1,541	92
KRNs	723	2,347	+225%	6,388	180
Enrolled Nurses	2,410	7,696 ^{3/}	+219%	7,908	app. 1,000
Clinical Officers	546	1,251	+129%	Not Available	120

^{1/} MOH: Development Plan: 1984-1988

^{2/} Central Bureau of Statistics: 1979 Population Census

^{3/} The apparent discrepancy between the total number of enrolled nurses (including both ENs and ECNs - 7,696 in Table III.2) and the estimated 8,000 ECNs mentioned in para. III.2 reflects both the growth in the ECN cadre from 1982 to 1984 and the fact that the Table includes only nurses actually employed by the MOH while para. III.2 refers to all trained ECNs, including those who are employed by the private sector or have dropped out.

IV. IN-SERVICE FAMILY PLANNING TRAINING FOR ENROLLED COMMUNITY NURSES AND CLINICAL OFFICERS

IV.1 The National Family Welfare Center

The MOH program of in-service training of ECNs and COs in FP is conducted by the Training Department of the National Family Welfare Center (NFWC). The NFWC was established in 1974 as a unit within the MOH to coordinate, expand and improve all aspects of MCH and FP services in the country and to provide necessary specialized in-service training in FP for the various cadres of health personnel. The Director of the NFWC answers directly to the Director of Medical Services of the MOH. In addition to ECNs and COs, the NFWC plans to initiate a 4-week in-service FP training course (including minilaparotomy procedure) for physicians at the NFWC next year. The NFWC will also play a major role in promoting the development, acceptance and support of community health workers. Although the actual training of this new cadre of volunteer workers will be conducted at the local level by the District Health Teams, the NFWC will provide leadership and technical and administrative support. The NFWC may also become involved in training TBAs (see II.2.1). (See Appendix C for a brief description of the evolution of the NFWC.)

IV.2. Trainees

IV.2.1 Numbers of ECNs and COs Trained

USAID funding of the NFWC's in-service training for ECNs and COs is provided through Part B of the USAID Mission to Kenya's project entitled "Family Planning II" (No. 615 - 0193). At the time the AID funding began, the NFWC was training about 120 ECNs per year; 30 ECNs were enrolled in each 8-week course and the course was repeated 4 times to produce 120 trained ECNs per year. USAID funds were to be used to assist the NFWC to expand its training capacity so that 900 ECNs and 270 COs could be trained during the 3-year project period or 300 ECNs and 90 COs trained during each project year. 14/

Table IV.2.1 on the next page, summarizes the output of ECNs, KRN/Ms and COs trained by the NFWC since the training program began in 1972. The output of trained KRN/Ms is included because of the importance of this cadre to the total effort to provide FP services through the MOH's rural health facilities and because COs and KRN/Ms attend the same course. Therefore, training slots filled by COs potentially reduce the number of slots available to KRN/Ms. KRN/Ms and COs are trained together in one course. When the CO training was started, the total number of students in the course remained the same but the number of KRN/Ms admitted to the course was reduced to accommodate the COs. The current annual output is estimated at about 25 COs and 39 KRN/Ms. The NFWC began to train ECNs in 1972, KRN/Ms in 1975, and COs in 1982. The totals trained to date (September 1984) are: 1,740 ECNs; 368 KRN/Ms; and 69 COs. AID funding was in effect during 1982-84.

Table IV.2.1: ECNs, KRN/KRMs AND COs TRAINED IN FAMILY PLANNING BY THE NFWC

Year	ECNs		KRN/KRMs		COs	
	In Year	Cumulative	In Year	Cumulative	In Year	Cumulative
1972	6	6	-	-	-	-
1973	77	83	-	-	-	-
1974	81	164	-	-	-	-
1975	135	299	17	17	-	-
1976	179	478	38	55	-	-
1977	139	617	35	90	-	-
1978	117	734	41	131	-	-
1979	115	849	39	170	-	-
1980	97	946	40	210	-	-
1981	118	1064	39	349	1	1
1982	130	1194	42	291	17	18
1983	305	1499	39	330	25	43
1984*	241	1740	38	368	26	69

* Through September 1984

In mid-1983, in an effort to increase the capacity to train ECNs, the NFWC established six satellite ECN training programs in provincial medical centers. Their combined annual output is approximately 216 ECNs. As the central NFWC training facility in Nairobi has continued to train 120 ECNs per year, the total program's capacity to train ECNs has increased from 120 to 336 per year. The actual output has been less, however, because of failure of some trainees to attend. In addition, courses have occasionally been cancelled due to lack of funds. Despite these problems, the NFWC's output of trained ECNs has been close to the projected 300 per year goal.

On the other hand, the CO training has fallen far short of the projected goals. The 69 COs trained to date represent only 26 percent of the original three-year goal of 270. A major reason for the shortfall is that the NFWC never developed the capacity to train 90 COs per year. In addition, the COs themselves have been relatively unenthusiastic about the courses. For example, only nine of 15 COs scheduled for January-March 1984 actually enrolled. Finally, CO training was temporarily suspended during the fall of 1983, while the NFWC conducted an evaluation (see IV.5.1). In addition, it should be noted that to the extent that COs have been trained, it has been done at the expense of lost capacity to train KRN/Ms. Although the number of KRN/Ms trained has remained relatively stable since 1976, if COs were not included in the training, the KRN/M numbers would have gone up.

IV.2.2 Selection and Deployment

The NFWC staff in Nairobi determine how many students each district can send for training. The DPHN, with help from the hospital matron and others, selects candidates based on her knowledge of the staffing and needs of the various facilities.

According to a 1983 NFWC evaluation (see IV.5.1), 95 percent of ECNs, 65 percent of the KRNMs, and 67 percent of the COs were assigned to jobs in areas including MCH/FP. 15/

ECNs: Some of the ECN positions are filled with enrolled nurses or enrolled nurse-midwives (see Appendix B), but no one without midwifery is selected. The DPHNs give priority to nurses already working in MCH/FP units. The training seems to be desirable among nurses and there are many volunteers. However, some who do not express a wish to participate are also selected because of the need for FP service capacity in a particular facility.

After completing the NFWC course, trained ECNs usually return to the facility from which they were selected, although they may be given a new or enlarged assignment in which they can use their new skills. Of course, there is no guarantee that trained ECNs will stay in MCH/FP positions, and for various personal and staffing reasons, some do not. In some cases the return of newly-trained ECNs has resulted in conversion of a previously curative-care only dispensary into an SDP providing child immunizations, prenatal care, and FP in addition to curative care. No rural health facility without a NFWC-trained nurse is allowed to provide FP care. From 20 - 25% of ECNs trained by the NFWC have been men.

COs: COs are less likely to volunteer for the training, as many view FP as "women's business" and beneath the concern of physicians and their assistants. However, the CO tutor at the NFWC says that CO interest in the training is increasing and that he has many letters from COs who want to be trained. COs trained in FP generally return to their rural health centers.

KRN/Ms: Most KRN/Ms who complete the NFWC training are deployed as nursing school faculty and to supervisory positions. However, as the NFWC training is now part of the one-year registered level PHN course (see III.1.1.3), some who receive this training will work in fields other than MCH.

IV.3 Design of Training Program

IV.3.1 Summary

A faculty of 22 tutors handles the training of the 300 ECNs, 40 KRN/Ms and 35-40 Cos scheduled for enrollment annually. They include 21 KRN/M/PHNs and one CO. Ten faculty work at the central NFWC offices in Nairobi and 12 at the outlying facilities, two per program. In addition to teaching, the NFWC faculty in Nairobi have overall responsibility for the program, including setting the curricula, providing administrative support and ensuring that quality is maintained.

The six decentralized training programs are located in hospitals associated with some kind of school of nursing. Each is run by two tutors.* Each of the six decentralized training programs repeats the 9-week course 3 times per year, with the same classroom/clinical breakdown as in Nairobi. The total annual enrollment is 36 ECNs for each of the six centers.

IV.3.2 The Curricula

The general ECN curriculum was developed in the early 1970s when the NFWC first began to train nurses in FP and was revised during a training of trainers (TOT) course given by the International Training in Health Program (INTRAH) and the MOH in 1981. Expansion and revision of the curriculum to meet the specific needs of KRN/Ms and COs was begun at the same time and is still in progress (see IV.4.1). The time provided for classroom teaching for all categories was increased from two to three weeks only recently to permit more study of child-growth monitoring, oral-rehydration therapy, and clinic management skills. Although these subjects are now in a draft revised curriculum for the KRN/CO course, the ECN curriculum given to the evaluation team does not reflect these changes.

ECN: The current ECN curriculum is designed to give the learner (1) knowledge of the history and current status of FP in Kenya and the importance of FP for MCH; (2) understanding of the ECN's role and responsibilities in delivery of MCH/FP services; (3) skills necessary to work as an effective member of the MCH/FP service delivery team; (4) increased knowledge of the male and female reproductive system; (5) knowledge of common reproductive health problems of women (e.g., vaginitis, pelvic infection, sexually transmitted diseases, infertility and abortions); (6) ability to take an appropriate personal, social, medical and obstetric history from a woman coming for a FP method; (7) ability to perform a systematic physical examination, including the breasts and reproductive organs, and to detect deviations from normal; (8) ability to take a pap smear;

* When the courses are not in session, the NFWC tutors work in the MCH/FP clinic or fill gaps in the system of MCH/FP training and service programs which are administered in and by the provincial and district hospitals in which the decentralized NFWC training programs are located.

(9) knowledge of FP methods (oral contraceptives, injectable progestational contraception, IUCDs, diaphragms and spermicides), how they work and their effectiveness, side effects, advantages, disadvantages, indications and contraindications; (10) interviewing and communication skills and the ability to counsel FP clients; (11) ability to determine which women can use which FP methods with safety; (12) ability to initiate and manage the use of oral and injectable contraception; and (13) ability to insert, check and remove IUCDs. The only major omission is training on the use of low-dose, progestin-only pills by breastfeeding mothers (see II.2.3.5).

CO: The goals for CO training have expanded in light of a 1983 NFWC evaluation which indicated that they were not able to manage FP clients or perform physical examinations and provide contraceptives at the standards expected of them (see IV.5.1). The original agreement with USAID stipulated that the COs' MCH/FP training would equip them "to prescribe oral contraceptives and to supervise the FP services rendered by ECNs more effectively". ^{14/} It also indicated that after the first 41 COs were trained, the training period would be reduced from 9 to 4 weeks. However, the report of the 1983 NFWC evaluation of trained COs states that the "objective of training this cadre of health workers was to make them competent supervisors and managers of service delivery points, as well as to make them competent FP clinicians so that they would be consulted by the Enrolled Community Nurses" (see para. IV.5.1). ^{15/} On this basis, the evaluation report not only recommended that the CO training program remain at 9 weeks, but also urged that more time be allocated to administration and communication skills, that management of FP method complications be emphasized in the curriculum, and that the curriculum be modified to cover adequately management and supervision. ^{15/} In fact more content on management and supervision has been added to the recently revised curriculum for KRN/Ms and COs. At this point, their revised curriculum is designed to achieve all of the objectives included in the ECN training and in addition covers material on (i) human sexuality; (ii) neoplasms of the reproductive organs; (iii) natural family planning, including traditional methods; (iv) male and female sterilization; (v) how to establish and manage an SDP; (vi) teaching methods; (vii) child health (growth and development, immunizations and breastfeeding); (viii) management and leadership skills; (ix) environmental sanitation; and (x) fitting diaphragms.

The new revised KRN/M/CO curriculum is more specific than that for the ECNs. It spells out the number of clinical experiences each student must have, (e.g., at least 15 pap smears, 2 IUCD insertions, prescription of oral contraception for 10 new clients); it includes detailed information to guide the teachers' lesson plans; and it identifies "critical elements" of each classroom session and suggests specific teaching/learning methods for each of the critical elements. The curriculum does not include adequate information on the safe use of low-dose progestin-only pills, which are intended only for women with lactational amenorrhea. The Team was told, however, that the MOH is in the process of developing a new FP manual, which will include guidelines for prescription and use of low-dose progestin-only pills.

IV.3.3 Teaching/Learning Methods and Aids

The curricula calls for a wide variety of teaching/learning methods, (they specify lecture, group discussion, "brainstorming," role play, demonstration and return demonstration, and use of slides and films). Many of these require

active participation by the students. Each group of new students is given a pre-test to assess their knowledge and attitudes about FP.

Lack of materials for students is a major problem. None of the decentralized programs visited by the evaluation team had a pelvic model on which to demonstrate and practice pelvic examinations and insertion of IUCDs. Although some books may be available in nearby nursing school libraries and the medical libraries of the district hospitals, most students seem to use only the handouts provided by tutors, which are out of date and lack adequate detail (see IV.4.2). At some sites, the team found a few copies of three MOH self-instructional booklets ("The Loop," "Human Reproduction" and "Introduction to Family Planning"). While reasonably good, these were several years old. The best publication available for general dissemination was Family Planning and Practices: Africa, produced by the Centers for Disease Control (CDC). The MOH has begun distribution of this book, but at the time of the Team visit, copies were available only in Nairobi. Assuming that the distribution, which has only begun, will include the students and tutors of the decentralized NFWC training program, it will radically increase their access to current and detailed information relevant to safe and effective FP. In addition, the MOH has recently signed an agreement with the World Health Organization (WHO) for the development of MCH/FP teaching materials and manuals suited to their specific Kenyan needs.

The tutors of the decentralized training programs apparently have access to audio-visual equipment, which they can borrow from the local ECN school or some component of the district hospital.

The evaluation Team was particularly concerned because the handouts that the students take with them when they leave the course and refer to after they are engaged in FP practice are not current. For instance, the handout on IUCDs advises leaving the IUCD in place if the woman becomes pregnant or experiences uterine infection. This is what was being recommended several years ago, but more recent studies indicate that it is better to remove the device.

Although the overall curriculum is set by the central NFWC staff, there appears to be considerable variation between the decentralized training programs. Individual tutors must draw up their own lesson plans, and the content actually taught probably varies significantly depending on the knowledge and skills of the individual tutor and the resources to which she has access. For example, tutors functioning at a hospital that has a gynecologist interested in FP have access to more and better information than tutors in places where the medical leaders are disinterested or opposed to FP. At one center, the tutors have involved a variety of local resources including tutors from the local ECN school, the DPHN, and the District Health Education Office.

IV.3.3 Supervised Clinical Experience

The six weeks of supervised clinical experience is provided mainly in the large-volume MCH/FP out-patient clinics associated with provincial, district or municipal hospitals (see IV.3.1). To find appropriate sites, the NFWC tutors work closely with the DPHN. Students are always sent to sites in which working ECNs who have already had the NFWC training are providing FP services and can serve as the student's clinical preceptors. Students usually are not sent to

rural health centers and dispensaries because the volume of FP clients in those facilities is too light and sporadic to meet the students' training needs. The major problem would seem to be the need to disperse the students thinly enough so that each will have an opportunity to take care of an adequate number of patients and, in particular, to practice the required 20 IUCD insertions. At the time of the evaluation Team's visit, the decentralized training programs were providing clinical experience for a class of ECNs who had done their classroom work in Nairobi; thus only 2 - 4 students were being trained in each program, and exposing each student to an adequate volume of FP patients was not a problem. Although tutors claim they have managed to date, it must be considerably more difficult to provide an adequate volume of patients, especially for the IUCD insertions, when the decentralized programs are conducting their own programs with 12 students.

The majority of each student's clinical supervision is provided by practicing ECNs. The usual arrangement is two or more students working in a room with one already trained and practicing ECN and with occasional observation and guidance provided by the tutors, each of whom must oversee the clinical training of six students, some who may be at separate sites. Most of the supervisory ECNs are themselves recent graduates of the NFWC course; therefore, their knowledge base should be current and their individual strengths and weaknesses should be known to the tutors. The tutors must travel between sites to supervise their six trainees, and since transportation is often a problem, the major burden of clinical training falls to the ECNs, who also serve as students' role models.

The tutors focus on assessing the individual student's practices and skills. They report that after several weeks they can tell which students are confident and which are having problems and give special attention to those who need it. They find that many students have difficulty in learning to assess the non-gravid uterus and to palpate ovaries. During the last week the tutors specifically observe each student taking care of at least two FP patients, including insertion of an IUCD if possible. The tutors, however, do not use written evaluation guides to observe and assess specific critical elements of each student's clinical performance.

In addition to clinical assessment, the students must pass two written examinations prepared by the NFWC faculty in Nairobi. One is given after the three-week didactic portion of the curriculum and one at the very end of the program. Students who fail the written exams or who are judged not to be clinically competent must repeat part of the course the next time it is offered and then are re-examined. Few students fail the written exam and almost none have failed to pass the practical assessment. Those who have had to repeat parts of the course have passed after their second examination. The evaluation team was not able to see a copy of the written examination (as is appropriate for the security of the test).

IV.4 Tutors

IV.4.1 Training

The tutors bring to their task of providing FP training extremely strong backgrounds, both educational and clinical. Except for the single CO, all the tutors are KRN's who have also completed the KRM and PHN training (KRN/M/PHNs). In addition, except for the few who started the training program in 1972, they

have all taken the NFWC FP course themselves. Most of them have had considerable experience in nursing/midwifery service; many have also served as supervisors and/or as tutors in other training programs. In addition, most of the tutors have participated in a variety of TOT courses designed especially to meet their needs. These include:

- ° INTRAH and the Nursing Division of the MOH together conducted a 3-week course in March-April 1981 to prepare 20 tutors for the NFWC FP training program (see IV.3.2).

- ° A few tutors have also participated in other MCH/FP teaching and management skills workshops conducted by INTRAH and the MOH over the past several years.

- ° The NFWC itself organized a two-week course to prepare the necessary number of new tutors prior to starting the decentralized training programs in 1982. Some of the KRN/Ms, who are not officially designated as tutors but supervise the clinical experience for ECN students trained in Nairobi, have also been included in these courses.

- ° Some of the core faculty have attended special FP and/or TOT courses in the United States.

- ° In addition, some NFWC tutors occasionally have been invited to attend multi-disciplinary seminars on specific MCH/FP subjects which the MOH sponsors in various parts of the country from time to time.

IV.4.2 Reference Materials

In the three decentralized programs visited by the evaluation team, the materials provided to the students by their tutors were out-of-date. The handouts may even have been copies of the handouts which the tutors received when they were students in the NFWC course (see IV.3.3). None of these tutors possessed even a single adequate book or other resource for accurate, up-to-date technical/clinical FP information. The self-instructional MOH booklets observed at the decentralized training sites (see IV.3.3) may be helpful to the students but they are not an adequate reference for the tutors. At one program, the evaluation team assessed the FP reference materials available in the libraries associated with the nursing school. It contained several books which included short chapters on FP, copies of some MCH/FP self-instructional units produced in the mid-1970s, one copy of an International Planned Parenthood Federation (IPPF) publication on how to communicate about FP, and one relatively recent book on conception and contraception. The library is given only Shs. 4,000 to spend on books per year. A large part of its collection has been contributed, including 252 books provided by the INTRAH Program and some new books recently contributed by the United States during a recent visit by the United States Ambassador. By chance the tutor responsible for the nursing school library was present when the Ambassador made the presentation and was able to secure some of the less technical books for the nursing library. The tutor said that if he had not happened to be present, all the books would have gone to the medical library and none to the school of nursing. Similarly, it was discovered that although 30 copies of Family Planning Methods and Practice: Africa 14/ had been sent to the Medical Director of the

provincial hospital where another decentralized NFWC program is located, neither the NFWC tutors nor any of the other nurses responsible for providing and supervising FP services in that hospital and district had seen or received a single copy. In the third hospital program visited by the evaluation team, one of the senior nursing administrators had a copy of Family Planning Methods and Practice: Africa which she was given when she attended a FP seminar. She had, however, put it on her shelf and had not shared it with the tutors. In addition two ECN students, who were having clinical experience at a decentralized NFWC program after having had their classroom work in Nairobi, had copies, although their clinical tutors did not. When the Director of the NFWC recently invited tutors in one of the decentralized training programs to place orders for some books, the books they ordered were not specific to FP.

IV.5 Performance of Graduates of the NFWC Training Program

IV.5.1 In 1983, the NFWC conducted an evaluation of a sample of COs, KRN/Ms, and ECNs trained in the NFWC FP courses. Table V.5.1 shows that the KRN/Ms had the best overall scores; that ECNs had the weakest understanding of the reasons for FP; but that the COs scored lowest in the two other categories: managing FP clients and performing examinations and prescribing contraceptive methods.

Table IV.5.1: FINDINGS FROM THE 1983 NFWC EVALUATION OF THE PERFORMANCE OF COS, KRN/MS AND ECNS TRAINED IN FAMILY PLANNING *

<u>Variable Measured:</u>	<u>KRN/Ms</u>	<u>COs</u>	<u>ECNs</u>
Good to excellent understanding of the health & social reasons for FP	49%	44%	30%
A passing mark on management of FP clients	80%	75%	88%
Performed systematic physical exam & prescribed appropriate contraceptive method	80%	67%	75%

* This evaluation was based on a sample including 12 COs selected to represent every province and a random sample of 17 KRN/Ms and 22 ECNs.

IV.5.2 COs

The evaluation Team's observations of the performance of trained COs working in rural health facilities showed that they are predominantly men and that they function as the officer-in-charge of the RHCs and provide curative care; they do not function in the MCH/FP clinics. They are less knowledgeable and skillful than ECNs in MCH/FP, and therefore ECNs do not look to them for clinical supervision in these areas. However, some COs utilize their FP training by participating in the health education sessions which are provided in the clinic waiting rooms early each morning before the clinics start (see II.2.4.2).

IV.5.3 ECNs

Attitudes and Motivation: All ECNs trained in FP at the NFWC and interviewed by the evaluation Team said that they enjoyed the training and that they like being able to do FP. They are all nurse-midwives and feel that they should be able to give complete care to normal women. Before the training they felt deficient and were embarrassed to have to refer a woman who wanted FP to someone else. Some ECNs taking the NFWC course in the Kisumu area were especially motivated to learn FP because TBAs in the area are being trained to resupply women using oral contraceptives and the ECNs feel threatened because TBAs were doing something that they were not yet competent to do. Most of the trained ECNs seemed to understand the need for FP. Although it should be noted that only 30 percent of ECNs included in the NFWC evaluation were found to have "good to excellent understanding of the health and social reasons for family planning," 15/ the ECNs seemed especially to enjoy FP and were anxious to extend their skills and knowledge in this area.

Counseling Skills: Although the evaluation Team observed only a few counseling sessions, it was impressed by the technical competence and good interpersonal relationship skills observed. The observed ECNs listened to patients and remembered patients whom they had taken care of before. They talked to the patients while carrying out IUCD insertions, telling each woman what she could expect to feel as the insertion procedure progressed. The nurses seemed confident and at ease and remembered to fill out all of the required clinical and statistical records.

On the other hand, ECNs could be more aggressive in raising the issue of FP while engaged in other MCH activities. For example, ECNs do not perceive prenatal care sessions as the appropriate time to bring up the question of child-spacing. They are more likely to raise the issue in the short period (one or two days) during which the 20 to 30 percent of Kenyan women who deliver their babies at hospitals or health centers remain in those health care sites. Even then, it is not certain that they will discuss FP. Although in many countries contraception is initiated at the 4-6 weeks post-partum examination, this opportunity is missed in Kenya; women are not routinely advised to get a post-partum examination and relatively few do, unless they have experienced complicated deliveries, in which case they are probably referred to a physician. Mothers who bring their infants for immunizations are given advice on breastfeeding and nutrition, but it depends on the motivation of the individual nurse whether the need for and availability of child spacing methods is also discussed.

Technical Competence: Technically, the ECNs appear to have been performing in a competent and professional manner. The IUCD insertions observed by the Team were technically correct, as was the screening carried out for women using oral contraception. The ECNs use all of the information and skills taught in the NFWC curriculum except for their training in how to take a Pap smear. Since RHF's do not have the necessary materials to take Pap smears, ECNs refer suspected cervical pathology problems to the district hospital. The only current gap in their training appears to be in regards to prescribing low-dose progestin-only pills for breastfeeding women.

V. CONCLUSIONS AND RECOMMENDATIONS

V.1 Health and Family Planning Services

V.1.1 Coverage and Demand

More than half of all households in Kenya are located four or more kilometers from the nearest health facility, and only about half of the RHF's offer FP services. Those that do vary greatly in the extent to which those services are actually used. Although the number of RHF's which offered FP services increased from 505 in 1979 to 742 in October of 1984, (a 47 percent increase in approximately five years), MOH FP service statistics have not mirrored this increase. The health system is, however, able to reach a large and growing proportion of the population with other essential MCH services. In 1978 it was estimated that 65 percent of pregnant women in Kenya went to a health facility for at least one prenatal care visit, and the percentage may be higher now. In addition, nationwide approximately 49 percent of infants are now receiving a full schedule of vaccinations, and a major effort is underway to increase the coverage to 75 percent by 1986. One district that has been involved in the special immunization program already has coverage of 78 percent. In contrast, the 1978 Kenya Fertility Survey showed that only 7 percent of couples were using a FP method.

Despite the desire of most Kenyan women for a large completed family, many women who attend the MOH's integrated MCH/FP facilities are interested in FP. There is a small demand for FP from young, unmarried girls who are in school and want to avoid their first pregnancies and among some older women who already have as many children as they want and seek to avoid the physical stresses and risks of bearing another child. But by far the biggest demand is for spacing children, with much interest in spacing among younger, low-parity mothers. The desire for FP seems greater among younger women who are also becoming involved in other social changes.

There also seems to be an increasing desire for IUCDs, especially because so many women live far from a health facility. In addition, many women seem to know about and specifically request a copper-bearing IUCD. Probably about one-fourth of the women receiving contraception from a MOH facility are using IUCDs.

V.1.2 Assessment of the Rural Health Care System

Although the Kenyan rural health delivery system suffers from resource constraints, it has many structural strengths:

- ° The nurses who provide the MCH services are products of a well-conceived system of basic nursing/midwifery education. Although FP content and clinical experience in basic nurse training programs has been slight, it is increasing.
- ° Education of the nursing leadership cadre, (nurses with combined KRN/M and PHN degrees), is very good and currently includes intensive FP training. This cadre plays several very important roles, especially as nurse tutors and as supervisors of MCH/FP services in the rural health facilities.

- ° The focus of the system on community outreach is increasing. Community health workers who will assist in the distribution of oral contraceptives and other health commodities are being introduced. In addition the training of the Rural Health Unit leadership teams stresses education/communication skills and methods to assess the needs of people who currently are not being reached by the health system.
- ° The recent decentralization of responsibility to districts should increase the system's responsiveness to actual local needs.
- ° Overall, the MOH program is not static but is dynamic and progressive, constantly responding to needs with changes and refinements.

Recommendation:

(i) USAID should continue its strategy of supporting fuller development of the MOH's IRH/FP Project.

V.1.3 Quality of Service

V.1.3.1 General Observations. The MCH/FP clinics in some hospitals and at least one entire district serve approximately one new FP client for every three pregnant patients; however, some other facilities, especially RHCs and dispensaries, may serve as few as one FP client for every 20 or 30 pregnant patients. Although part of the difference in the FP performance of different facilities is related to differences in the desire for FP among the populations each facility serves, differences of this magnitude probably also reflect variation in the quality of FP education and services offered in the facilities or the quality of leadership and supervision provided to the various facilities by key physicians and nurses.

However, the fact that some MCH/FP facilities can provide a high level of FP services means that the MOH system has the potential to meet the FP needs of a significant proportion of Kenyan women.

Recommendation:

(ii) Research should be conducted to identify characteristics of MCH/FP facilities which are successful in meeting the FP needs of a large proportion of the women who come to the facilities for any MCH service.

The research should seek to determine how those facilities differ from facilities which serve the FP needs of only a small proportion of the women who attend them. Attention should focus on factors in the training, supervision, supplies or other supports which are associated with more successful FP services.

V.1.3.2 Service Format and Public Education. The integration of FP and MCH care in many SDPs has not yet been realized. Seeking advice on FP for many women remains a time-consuming and even awkward experience. The provision of FP also seems to be a secondary concern of the facilities, with posters both inappropriate and poorly displayed and health education talks perhaps too little oriented to FP.

Recommendations:

(iii) When more ECNs have been trained, the integration concept should be implemented completely, with FP information and materials and a nurse prepared to provide FP methods in every room in which care is given to pregnant and post-partum women.

(iv) Posters which demonstrate the value of child spacing should be designed to appeal to childbearing women and should be displayed in all areas used by women who attend RHF's.

V.1.3.3 Continuing Education for Health Personnel. There is probably an inadequate supply of current technical FP references within the MOH system as a whole. In addition, when references and other sources of information relevant to FP are distributed to the MOH facilities, they tend to stay in the hands of physicians and are not sent to the nurses who actually provide the FP services. Instead, the MOH's approach to updating and improving the knowledge and skills of their staff seems to be based almost entirely on offering seminars. Relatively few people can attend any one seminar, however, and those who do usually lack the skills, time, resources and motivation to pass on the information they gain to their co-workers. In addition, second-hand knowledge will necessarily lose much of its impact. Finally, the original plan to develop a newsletter in conjunction with the IRH/FP Project has not materialized. In general, there is a lack of reliance on the written word as a basic means to provide continuing education to the MOH staff.

Recommendations:

(v) Whenever the MOH distributes circulars or any other written materials relevant to MCH/FP, copies should be addressed specifically to the categories of nurses who need to know the information being transmitted, (including at a minimum the NFWC tutors and the DPHN). If this is not done, these key people may never see the new information.

(vi) The NFWC should consider proceeding with their original plan to prepare a periodic newsletter for distribution throughout the MOH's system of integrated MCH/FP services and training.

V.1.3.4 Contraceptive Supplies and MOH Regulations. ECNs may have difficulty fitting IUCDs to the individual woman's uterine size. Although they were taught to do this using a uterine sound measured in centigrams, the only uterine sounds in some RHF's are measured in inches. Some ECNs have found creative ways to overcome this problem, but some have not. Poorly fit IUCDs are more likely to result in unintended pregnancies, often because the IUCD is completely or partially expelled. In some parts of the country, loop IUCDs have developed the reputation of being an unreliable method of contraception.

IUCDs are growing in popularity and probably account for at least 25 percent of the contraception provided through the MOH. Many women specifically request a copper-bearing IUCD. Unfortunately SDPs are often out of this type.

There is a great deal of confusion regarding the MOH's rules regarding use of pills and IUCDs. Circulars prohibiting use of pills by breastfeeding women

and prohibiting use of IUCDs by women with fewer than three children were apparently issued some time this year. Nurses in some places know about these rules, others have only heard rumors, and others know nothing about them.

Nurses who are trying to follow the new rules do not know what to do for breastfeeding mothers with less than three children who want contraception in order to space between pregnancies. The only methods the nurses can provide are condoms and vaginal foam, methods unacceptable to most husbands. If women who want to contracept are turned away with no method, the health facilities may develop the reputation of not being able to provide FP. In addition, although the reason for not allowing lactating women to use pills is to promote breastfeeding, if the women become pregnant, most of them will terminate breastfeeding completely.

Although the MOH plans to procure low-dose progestin-only pills for use by breastfeeding women, the nurses in the field have not been trained to use this method.

Recommendations

(vii) The MOH should procure metrically measured intrauterine sounds for use in all SDPs.

(viii) The MOH should procure an adequate continuing supply of copper-bearing IUCDs.

(ix) Concise but specific information on proper use of the progestin-only pills for lactating women should be developed by the NFWC and be distributed with the pills.

(x) Until the progestin-only pills arrive, the MOH should consider amending its rule to allow use of low-estrogen pills beginning at six months postpartum. This change would conform to WHO guidance in this area.

V.2 Health Care/Family Planning Workers

V.2.1 Output

The NFWC's output of trained ECNs has been close to the 300 per year which was scheduled in the original project plan. However, the NFWC has failed to train 90 COs per year, and has to date trained only 22 percent of the number planned. To the extent that COs have been trained, it has been done at the expense of diminished capacity to provide clinical FP training to the KRN/Ms who serve as nursing school tutors and who supervise the rural MCH/FP services.

V.2.2 ECN Training

ECNs are an appropriate group for NFWC training. ECNs have both nursing and midwifery skills, so it is relatively easy for them to develop proficiency in FP clinical practice. ECNs provide the MCH/FP services in the RHF's. To integrate MCH and FP, it is essential that more ECNs be trained.

The method for selecting individual ECNs for training and of deploying trained ECNs is appropriate.

Recommendation:

(xi) The training of ECNs should be continued and if possible increased. Any increase would require opening additional decentralized training programs; if additional students were added to existing programs, there would not be sufficient opportunity for students to observe and perform an adequate number of IUCD insertions.

Although most of the trained ECNs enjoy their role in FP and appreciate the training, the recent NFWC evaluation found that only 30 percent had a "good to excellent understanding of the health and social reasons for FP." Although they vary in their abilities to educate and counsel women, some are very good. Most ECNs, however, do not initiate discussions of child spacing until after the baby is born.

Every indication is that they are clinically competent, safe FP practitioners. The only gap in this knowledge is the issue of progestin-only pills, which has arisen recently as a consequence of new MOH regulations (see V.1.3.4).

Recommendations:

(xii) The NFWC curriculum should emphasize that the prenatal period is the best time to introduce women to information about FP, with follow-up planned for the post-partum period.

(xiii) A pelvic model for teaching and practicing pelvic assessment and IUCD insertions should be procured for every decentralized training program.

(xiv) Tutors at the central NFWC facility in Nairobi should immediately develop a curricular unit on the appropriate use of low-dose progestin-only pills by women with lactational amenorrhea, including the specifics of:

- (a) when to start women on the low-dose progestin-only pills, (probably at six months post-partum);
- (b) symptoms the women should expect while using progestin-only pills (especially irregular bleeding);
- (c) when to switch a woman from the progestin-only to a regular combined pill (when she begins to menstruate or at one year, whichever occurs first); and
- (d) the importance of not letting women continue to use the progestin-only pill after they resume menstruation (because the risk of ectopic pregnancy is higher with progestin-only pills).

V.2.3 CO Training

The CO training needs improvement. Since COs have only a weak background in MCH and are not midwives, it is difficult for them to develop adequate clinical FP skills. The NFWC's internal evaluation of the CO training program showed that the level of FP knowledge and skills among trained COs was less than among trained ECNs. In addition, COs do not provide MCH services, so they are not in a position to use these skills. Although they are in charge of the health center and provide overall supervision to ECNs, they can not provide clinical supervision to ECNs for normal MCH/FP because in this area they are less knowledgeable than the ECNs. However, the training does give COs important knowledge of FP methods and of the social and health benefits of spacing children and avoiding births at high maternal age and parity. Trained COs, who are mainly men, could make an important contribution by discussing FP during the patient education sessions held in most RHCs at the beginning of each morning clinic session, and by discussing FP with men in other settings. In addition, COs need to be well trained in managing FP method complications.

Recommendations:

(xv) COs should no longer be included in the NFWC clinical FP training program and the number of RNMs trained in the program should be increased.

(xvi) The NFWC should develop a new, probably shorter, training program to meet the specific needs of COs. The course should provide theoretical knowledge about all FP methods and should focus on the social and health reasons for FP and how to educate people, especially men, about the need to space children. The CO course also needs to focus on differential diagnosis and management of complications associated with specific FP methods and identification of those diseases and conditions which make it dangerous for a woman to bear more children. The CO's basic training in diagnosis and treatment make him the person to whom the ECN should turn in case of a FP method complication. He would also be the person most likely to see women who have a special need to avoid pregnancies because of chronic disease. Because such a course would not require extensive clinical experience, a larger group of COs could be enrolled per course.

V.2.4 Tutors

V.2.4.1 Materials. The tutors are well prepared, through their own educational and clinical experience backgrounds as well as special TOT courses, for their roles in the NFWC training program. Overall they do a remarkably good job despite limited resources. A major deficiency of the training program is the lack of a system to keep the tutors, and thus the program itself, up-to-date in the technical aspects of FP clinical practice. No current journals and few if any recent text and reference books seem to be accessible to the tutors, as a result of which some of what they are teaching is out-of-date.

Recommendations (v) and (vi) represent steps that might be taken to strengthen the lack of available information in the system. In addition:

Recommendations:

(xvii) Key FP references should be identified and provided in small numbers to the libraries (usually of nursing schools) which are available to NFWC FP students. Each reference set should include the recent Population Report on the effects of various methods of contraception on later childbearing, and the 1983 WHO publication on the interrelationships between breastfeeding and contraception.

V.2.4.2 Training. The Team felt that the NFWC should make a concerted effort to focus on the continuing education of its tutors, specifically through an annual week-long seminar. The Team also felt that the NFWC should keep closer account of the courses actually taken by trainers in the past.

Recommendations:

(xviii) The NFWC should convene an annual seminar/workshop to include all 22 of their tutors plus three or four of the District Public Health Nurses who are responsible for supervising MCH/FP services in the RHF's. The seminars should be for one week and should include:

- (a) A full day of training methodology update, for example, on the development and use of objective measures to evaluate clinical performance.
- (b) One or two full days of technical update in prenatal care, child health, and contraception. This update should involve someone -- preferably a physician from Kenya or another African country -- who is expert in contraceptive technology. During this day, each tutor should be provided her own copies of key up-to-date reference materials, such as articles reporting the results of important studies and publications (such as the Population Reports series) which compile and synthesize all of the relevant data on specific FP and other MCH subjects. Currently there is a particular need to give the tutors complete and up-to-date information on (i) safe utilization of progestin-only pills for women with lactational amenorrhea, (ii) what is known about the effects of various contraceptive methods on later fertility, and (iii) the effect of combined oral contraceptives (and of pregnancy) on breast-milk production and infant growth.
- (c) The tutors should be prepared to discuss specific problems they have encountered and successful ways they have overcome problems. One particularly important issue is how to assess and improve the teaching skills and clinical practice of the ECNs who supervise most of the students' clinical experience and serve as their preceptors and role models.
- (d) The tutors should also be instructed to bring copies of their lesson plans and the handouts they give to students. During two or three days of the workshop they should break into small groups to develop up-to-date, revised lesson plans and handouts for each of the core content areas covered in the NFWC curriculum. If this were done every year, what is taught would always be up-to-date.

- (e) In addition, at least half a day should be devoted to reviewing examples of various audio-visual and other teaching/learning aids, so that the tutors can know what is available. Because resources for purchasing books and other teaching aids are limited, the tutors should be helped to select the best aids available.
- (f) One session should be devoted to discussion of what reference materials are available in environments in which the decentralized training programs take place. Tutors should be encouraged to utilize the medical libraries and nursing libraries and they should be trained to use these resources.

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APPENDIX A

APPENDIX A

INSTITUTIONS VISITED/PEOPLE INTERVIEWED

A. NAIROBI

1. USAID Mission to Kenya:

- a) C. Gary Merritt, Ph.D., Acting Chief, Population and Health Division
- b) Charles Mantione, Deputy Chief, Population and Health Division
- c) Barbara Kennedy, Population Officer, Regional Economic Development Support Office/East and Southern Africa, USAID

2. Ministry of Health

- a) Dr. Salvatore Kanani, Senior Deputy Director of Medical Services
- b) Mrs. Eunice Muringo Kiereini, Chief Nursing Officer
- c) Dr. James Maneno, Project Manager, Integrated Rural Health and Family Planning Programme, and Assistant Deputy Director of Medical Services
- d) Mrs. Tabitha Odouri, Deputy Chief Nursing Officer, Training
- e) Mrs. Rosalind Waithaka, Public Health Nurse, Senior Nursing Officer

3. National Family Welfare Center

- a) Dr. John Kigundu, Director
- b) Mr. Antony Kamau, Research and Statistics Department
- c) Mrs. Lydia W. Cege, Head of Training Department
- d) Mrs. Milka Odipo, Kenya Registered Nurse Public Health Nurse, Tutor
- e) Mrs. Eunice Kithinji, Tutor
- f) Mr. Antony Ophwette, Clinical Officer, Tutor

5. Kenyan Catholic Secretariat (Medical Services Department)

- a) Dr. John Kweri, Director
- b) Sister Joan Devan, Medical Secretary
- c) Ms. Rose Wahome, Nursing Officer

6. Maendeleo ya Wanawake Organization

Mrs. Jennifer J. N. Mukolwe, M.S., Chief Project Administrator, Maternal Child Health/Family Planning

7. Family Planning International Assistance

Ms. Nancy Harris, Regional Director

8. African Medical Research and Education Foundation (AMREF)

- a) Ms. Margaret Mwiti, KRN, KRM, PHN, Tutor in AMREF Family Planning Training Program for ECNs who will work in the private sector
- b) Mrs. Mindy Johanl, KRN, CNM, (a Canadian citizen educated as a nurse-midwife in the U.S., she is conducting a thorough evaluation of the AMREF family planning training program).

9. Department of Adult Education, Ministry of Culture and Social Services

Mr. David Macharia, M.A., Director

10. Nursing Council

Mrs. Mujomba, Registrar

B. NYERI AREA (OCTOBER 24- 25, 1984)

1. Nyeri Provincial General Hospital

- a) Dr. John Githiari, Provincial Gynecologist, Medical Superintendent
- b) Miss Rose Gichuki, PHN, District Public Health Nurse Supervisor
- c) Miss Anne Nzimbi, Matron
- d) Mrs. Mary Ndirangu, NFWC Family Planning Tutor
- e) Miss Lucy Mwogo, KRN, NFWC Family Planning Tutor
- f) Ms. Joan Muriithi, EM, student from NFWC training course getting clinical FP experience at Nyeri Provincial General Hospital
- g) Ms. Margaret Njogu, EM, student from NFWC training course getting clinical FP experience at Nyeri Provincial General Hospital

2. Nyeri Medical Training Center

Ms. Florence Nderitu, Tutor, School for Enrolled Community Nurses

3. Mathiari Catholic Hospital

Sister Sylvester, Sister Matron

4. Ihururu Dispensary

Mrs. Kagumba, ECN trained in FP at NFWC

5. Wamagana Health Center

Mr. Justice Kibarua, CO trained in FP at NFWC

6. Attended part of District Conference on Breastfeeding held in Nyeri, October 22 - 24, 1984

C. MOMBASA AREA (OCTOBER 29 - 30, 1984)

1. Tototo Home Industries

a) Ms. Peace Karamba, Project Secretary

b) Mrs. Priscilla Tsuma, Coordinator for Makiwo Women's Group

2. Attended part of the National Conference on Control of Diarrhoeal Diseases being held at a hotel near Mombasa, October 29 - November 2, 1984

3. Mombasa Provincial Hospital

a) Ms. Margaret Achiba, KRN, KRM, PHN, NFWC Family Planning Tutor

b) Ms. Asya Ahmed, KRN, KRM - (Ms. Ahmed is involved in starting a training program for TBAs in the Mombasa area.)

c) Mrs. Agnes Thairu, MCH/FP clinic

d) Mrs. Betty Nyaga, MCH/FP clinic

4. Mombasa Provincial ECN School

a) Miss Purity W. Njogu, Principal

b) Mrs. Joyce Githaiga

5. Tiwi Rural Health Training Center

a) Mr. John Ngala, CO, Officer in Charge

b) Mrs. Rosemary Barasa, KRN, KRM, PHN, in charge of nursing services

D. KISUMU AREA (NOVEMBER 1 - 3, 1984)

1. Kisumu Provincial General Hospital

a) Dr. C. L. Khamis, District Medical Officer

b) Mrs. R. O. Dola, Matron

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- c) Ms. Mary Edebe, Director of Out-patient Complex
- d) Ms. Lucy Ochieng, KRN, KRM, PHN, Supervisor of MCH/FP Services
- e) Nurses observed in the MCH/FP out-patient complex: Mr. Hudson Nyamamba, Ms. Irene Okwisa, Ms. Mary Achieng, Mr. George Muia

2. Kisumu Medical Training Center

- a) Mrs. Rose Nyakiamo, KRN, KRM, PHN, Coordinator of NFWC Training Program in Kisumu
- b) Mrs. Janet Kamar, KRN, KRM, PHN, Tutor (heads teaching of public health, including MCH/FP, in the ECN curriculum)
- c) Mr. Shadrak Tallian, KRN, Tutor and in charge of the Medical Training Center Library

3. Railway Dispensary

Mrs. Jacinta Weya, ECN trained in FP at NFWC

4. Ahero Health Center

5. Chulaimbo Rural Health Training Center

- a) Mr. James Tolo, CO, Acting Officer in Charge, Tutor
- b) Mrs. Esther Seka, ECN trained in FP at NFWC

APPENDIX B

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APPENDIX B

ENROLLED NURSES, ENROLLED MIDWIVES, HEALTH VISITORS; FAMILY HEALTH FIELD EDUCATORS, COMMUNITY HEALTH WORKERS; TRADITIONAL BIRTH ATTENDANTS

Enrolled Nurses, Enrolled Nurse/Midwives and Health Visitors (ENs, EN/Ms and EHV's): Basic enrolled nurse training is hospital-based and lasts 2 1/2 years, including 3 months of MCH. After several years of nursing experience, ENs can go on to take one year of midwifery thereby becoming EN/Ms. After more experience they can take a further year of training in public health to become an enrolled health visitor (EHV). The MOH is now encouraging the training of enrolled community nurses over that of ENs. All of the basic EN schools and most of the EM schools are operated by NGOs. ENs are expected to be able to interview and counsel women regarding FP. EMs are also supposed to be able to prescribe and monitor oral contraception and insert IUCDs, although their student experience in IUCD insertion may be limited to observation of only 3 insertions and performance of only 6.

Enrolled Midwives (EMs): Although "direct-entry" (i.e., no nursing prerequisite) midwifery training programs (two years in length) have been discontinued by the government, 2 private direct-entry EM schools are still operating and many direct entry enrolled midwives are practicing in rural health centers.

Family Health Field Educators (FHFE) and Community Health Workers: The FHFE is a relatively new cadre, introduced in 1975. Mostly women, FHFES are used as a link between the institutionalized health services and the community. 7/ Each FHFE is associated with a specific rural health center and works in and with the community within a 6 kilometer radius of the RHC. The FHFE visits homes, markets and public meetings to educate the people in sanitation and nutrition and to motivate their use of immunizations, antepartum care and FP. However, after an evaluation, training of this cadre was stopped in 1981. The approximately 800 FHFES already employed in the field will be retrained as community health workers. In addition, unpaid community health workers will be recruited to work in their own communities on a volunteer basis. All the community health workers (retrained FHFES and volunteers) will be trained to provide general health education and first aid and to distribute oral contraceptives, pills for malaria prophylaxis, and lotion for treatment of scabies. In May 1984 FHFES working in Nairobi were trained in community-based distribution of oral contraceptives. They have experienced resistance from other health workers, who have refused to supply them with contraceptives. FHFES still functioning in rural areas are supervised by the District Health Education Officer and District Public Health Nurse.

Traditional Birth Attendants (TBAs): Although at least 65 percent of pregnant women get some antepartum care (at dispensaries, health centers or hospitals), the majority of mothers undergo childbirth at home with the assistance of TBAs. The MOH is undertaking a program to train TBAs for safer practice and earlier referral of complicated births to health centers and hospitals. Perceptions regarding the quality of the TBAs' care vary, and TBA practices probably vary from area to area. For instance, the MCH/FP Nursing Supervisor in Kisumu (where most women deliver in the hospital) thinks that most TBAs in her area have had some training and do a good job, while a nurse in Mombasa is concerned about TBAs who cut episiotomies, pack the wound with dung, and leave it open to heal without suturing.

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APPENDIX C

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EVOLUTION OF THE NATIONAL FAMILY WELFARE CENTER (NFWC)

The NFWC was designed to consist of five departments -- Administration, Clinical Services, Information and Education, Training, and Evaluation and Research. Currently, however, in conjunction with the MOH's plan to decentralize the administration of health services, the NFWC Clinical Services Department is being disbanded and its supervision, logistics and management functions are being assumed at the local level by the District Health Teams. The functions of the Information and Education Department are being transferred to the National Council for Population and Development.

The functions of the NFWC Evaluation and Research Department likewise will be absorbed by other institutions. Responsibility for clinical family planning research will be centralized in the Department of Obstetrics and Gynecology at Kenyatta National Hospital. Responsibility for social and demographic studies relevant to MCH/FP will be concentrated in the Central Bureau of Statistics. Responsibility for compiling and analyzing the FP service statistics (generated by forms filled out on each FP patient seen in the SDPs) will reside elsewhere in the MOH. The MOH is currently making plans to computerize and otherwise enhance its capacity to manage this kind of health service data collection system. Accordingly, Dr. Kigundu, Director of the NFWC, plans to transfer responsibility for this very important function of the NFWC Evaluation and Research Department to another component of the MOH and ultimately to delete that department from the NFWC. It appears that compiling, analyzing and publishing FP service statistics has been a major accomplishment of the NFWC Evaluation and Research Department. In order to enhance the MOH's capacity to manage an enlarged data collection/analysis system, the NFWC will organize a two-week training course for the MOH staff who will assume this responsibility, using statistical management staff from the MOH, the Population Studies Research Institute, and the Central Bureau of Statistics.

Transfer of all these responsibilities from the NFWC will leave it essentially as a training center. Unlike the other NFWC departments, which have all suffered recent staff losses, the Training Department has grown, especially due to the recent increase and decentralization of in-service training for ECNs to six provincial centers.