

## Chapter VII

### POPULATION POLICY AND FAMILY PLANNING

#### A. Population Policy

At the beginning of this century, the population of Nepal was not only less than half of what it is today, but was also growing at a very low rate. In fact, as can be noted from table 3, during certain intercensal periods there was a decrease in the actual number of people because of epidemics and large-scale emigration. Population growth did not then pose any serious problems and societal institutions and customs appear to have favoured more children and large families.

However, as in most developing countries, the period following the Second World War witnessed an unprecedented high rate of population increase in Nepal. This was largely due, as noted in chapter 1, to declining mortality and high and unchanging fertility. It also became evident that there would be further increases in the rate of population growth when foreign innovations in curative and preventive medical technology further reduce the death rates in a context where traditional cultural values tended to foster high birth rates.

The recent high rates of population growth posed a serious challenge to national development efforts by depressing the rate of savings and diverting the limited investment resources to meet the consumption requirements of a growing population, and by widening the already existing inequality in the distribution of wealth, incomes and opportunities. Besides, the increasing density continued to create imbalances in man/land ratios and spatial distribution of the population. There was thus an urgent need to formulate and implement a population policy which would influence the size, growth and distribution of the population.

The first national development plan for Nepal covered the period 1956-1961. The main objective of this plan relating to population dealt with employment and the only strategy emphasized was to absorb the increasing population by reclaiming the Terai and inner Terai forests for resettlement. The second plan covering the period 1962-1965 also laid emphasis on resettlement programmes as a means of absorbing the increasing population.

Though a chapter on "Population and manpower" was included in the third plan (1965-1970), there was no specific mention of measures needed to be taken in respect of problems arising from population changes. However, the chapter on health highlighted the importance of family planning in reducing the birth rate.

In the course of his annual address to the Rastriya Panchayat (National Parliament) in 1965, the late King Mahendra declared: "In order to bring equilibrium between the population growth and economic output of the country, my Government has adopted a policy of family planning." Subsequently, family planning services were provided as part of the maternal and child health programme of the Department of Health. Initially, these services were made available only to the people of Kathmandu, but they were gradually extended to cover the people of the valley.

In 1968, a semi-autonomous body called the Nepal Family Planning and Maternal Child Health Board was formed. Its terms of reference clearly stated that the Board would take measures to reduce the crude birth rate and to provide maternal and child health services in an organized manner throughout the country. This was the start of the provision of family planning services as part of over-all population policy. The FP/MCH

Project, under the direction of the FP/MCH Board, has since been providing family planning services, education, research and training, as well as the usual maternal and child welfare services.

An important and clearly stated objective of the fourth plan (1970-1975) was the effective use of manpower resources and control of population growth. In order to reduce the birth rate, the plan recognized the need to bring about the "required changes in the economic and social conditions, cultural patterns and aspirations toward life of the common man" and the implementation of an effective family planning programme.

In 1973, His Majesty King Birendra Bir Bikram Shah Dev declared that family planning services would be made country-wide and easily available to the rural people as well. In 1974, his Majesty declared that the programmes relating to the control of population growth and provision of maternal and child health services would be made more effective.

In view of the importance of changes in population variables for the socio-economic development of the country, the National Planning Commission set up a Task Force on Population Policy in May 1974 to prepare a report on that subject. The task force defined population policy "as that portion of public policy which deals with laws, administrative regulations, and action programmes having an indirect or direct effect on population growth and distribution."<sup>1</sup> Basically, those policies which aim to affect population growth or distribution must be congruent with the identified national development goals. Therefore, national family planning programmes and population resettlement programmes would clearly be within the scope of this policy.

The Task Force submitted its report to the National Planning Commission in September 1974. Based on the recommendations of the Task Force, the Commission presented a draft report

on population policy to the National Development Council. Consequently, a chapter on population policy was incorporated in the fifth five-year plan (1975-1980). The emphasis given to population questions in the fifth plan is far greater than in the previous plans. As a justification of the formulation of a population policy, it is stated in the plan that:

"Land and population are both crucial elements of development since these are the fundamental basis of all economic activities. While it is not possible to increase the supply of land, it is possible to effect certain changes in the nature of its utilization. The main factors affecting these changes are growth in size, distribution structure and occupational patterns of population .....The Population issue must, therefore, from a broader perspective. It is precisely against this background that the population policy has been formulated in the Fifth Plan".<sup>2</sup>

The main objective of the Nepalese population policy is to regulate the rate of population growth at levels conducive to the current and anticipated rate of economic development, and to achieve a population distribution consistent with the geographical distribution of the physical resource endowments of the country, and thus assist in enhancing the standard of living of the people within the shortest possible time. These objectives are expected to be achieved in the following manner:

(a) By reducing the crude birth rate through indirect measures such as social, economic, cultural, health and educational development and reforms, as well as through direct programmes of family planning;

(b) By controlling the flow of immigration into the country;

(c) By regulating the internal migration from the hills to the Terai and from rural to urban

areas in a systematic way on the basis of a set programme;

(d) By optimal spatial distribution of the population in relation to resource endowments of different geographic regions, particularly by focusing more attention on increasing the density of population in the western and far-western Terai;

(e) By encouraging the development of small urban centres in hitherto un-urbanized regions and providing these centres with necessary civic facilities in order to foster regional development.

The plan also recognized that, in order to implement the population policy successfully, there was a need for effective co-ordination and direction of population programmes and activities carried out by various ministries, departments and institutions. A high-level Population Policy Co-ordination Board was formed in August 1975 under the chairmanship of a member of the national Planning Commission. The secretaries to the ministries of finance, home and panchayat, health, law and justice, food and agriculture were designated members of this Board. Other members included the Director of Tribhuvan University, the President of the Family Planning Association of Nepal and the President of Nepal's Women's Organization. The Chief of the FP/MCH Project was designated as member secretary of the Board.

In 1975, His Majesty King Birendra Bir Bikram Shah Dev again declared that family planning services would be made available to the panchayats in a gradual manner. In his address to the Rashtriya Panchayat in 1976, His Majesty declared: " If a reasonable balance is not maintained in the growth of population and gross domestic product, it would invite poverty rather than affluence. Keeping this in mind, my Government is paying due attention to counteract

this imbalance by instituting appropriate policies and measures.<sup>13</sup>

In order to improve the data base for population planning, a citizen and vital registration system has been introduced to record births, deaths, marriages and divorce, immigration and emigration. Three rounds of the demographic sample surveys were conducted in 1974-1975, 1976 and 1977-1978 to collect information regarding the current demographic situation.

## **B. Family Planning Activities**

In Nepal, activities related to family planning are carried out by two independent organizations: the Family Planning Association (FPA), which is a private voluntary organization and the Family Planning and Maternal and Child Health Project (FP&MCH Project) of the Government. The two agencies differ in structure, approach and activities.

### *1. The Family Planning Association*

The Nepal Family Planning Association was formed in 1958 under the auspices of the Nepal Medical Association by a few Nepalese doctors and social workers who were concerned at the increase in population and its implications for the health of the mother and children. Those were days when people had not understood the significance of family planning and the subject was not discussed freely in public. The Association, which came into existence with the assistance of the Pathfinder Fund, reached its eventual growth and development through grants received from the International Planned Parenthood Federation (IPPF). The Association became an associate member of the Federation in 1960 and a full member in 1969. The Federation has been contributing more than 95 per cent of the Association's budget, in addition to providing contraceptive devices and expert services.

The primary goal of the Association is to contribute towards the acceptance of family planning as a way of life by Nepalese people and through such practice to ensure a happy and contented life for all families. The primary focus of the Association is to integrate family planning with community development programmes on the basis of felt needs and to provide impetus to the clinical programme of the government's FP/MCH Project, with the maximum input being in the area of information, education and communication.

In its early years, the Association established three family planning clinics in Kathmandu valley and these continue to operate. A programme is under way to expand operations outside the valley. There are two integrated family planning projects run by the Association: the Joint Pilot Project and the Boudha Bahunipati Family Welfare Project. Both these projects aim at achieving maximum possible concentration of efforts in specific areas and comprise mainly communication activities closely related to family planning, health and other developmental services, as well as to local initiative in social, educational, economic and recreational fields.

In order to achieve better co-ordination between the Association and the FP/MCH Project, a co-ordinating committee comprising representatives of the Department of Health and the Association was constituted. The Joint Pilot Project initiated in 1971 by this committee has as its main objectives the creation of local initiative in family planning and to generate and support social, cultural and recreational activities at the local level, with a view to motivating people to practice family planning methods. Initially, the project was started in ten village panchayats but was gradually extended to cover other areas. Under this project, the Association provides a team of motivators/health aides who, through home visits, film shows, exhibitions, folk programmes and group discussions, motivate people to adopt family planning methods.

The basic objective of the Boudha Bahunipati Family Welfare Project is to create the necessary environment for the establishment of comprehensive health, family planning and general services by promoting awareness of the need for family planning in the community. The project is largely operating in the hilly areas. The project team consists of an adviser, two field supervisors and several motivators. The project also runs a few clinics at which conventional family planning clinics at which conventional family planning contraceptives and sterilization services are offered.

The Executive Committee of the Association is responsible for the formulation of policies and programmes. The full responsibility for implementing the activities is vested with the General Secretary, who is assisted by the Chief Executive. The Central Office at Kathmandu is organized into four main divisions: Medical Division; Information, Education and Communication Division; Administration and Finance Division; and Field and Project Division. The organization chart is given in figure 5.

## 2. *FP/MCH Project*

The family Planning and Maternal and Child Health Project (FP/MCH Project), started in 1968, functions under the direction of the semi-autonomous Nepal Family Planning and Maternal and Child Health Board<sup>4</sup> in the Ministry of Health. The Project is the official agency responsible for family planning and maternal and child health at the national level.

The FP/MCH Project spent its first several years integrating maternal and child health and family planning operations, using existing health institutions in Kathmandu valley. During this period, the Project also trained a number of paramedical personnel for service in districts outside the Valley.

"An integrated FP and MCH program entails considerably more training of staff and more complicated logistics to supply clinics than would separate programmes. However, integration is mandatory politically. With Nepal's high child mortality, politicians feel a greater obligation toward providing services for present children than toward preventing future children. Politicians see family planning as the most capable network to meet this political need. This is the present rationale: historically, family planning grew from being just one of several MCH services. Field evidence suggests such liaison to be synergistic. While Family Planning offers Maternal/Child Health an infra-structure, MCH develops rapport for family planning among MCH clients, wins their trust and providing an excellent contact point for family planning motivation.<sup>6</sup>

The goal of the Project, as stated in the fourth five-year plan is "to bring about a balance of the various resources and population growth to improve the quality of human life".<sup>6</sup> The plan further stated that, in order to bring about this balance, the population of Nepal must be limited to the level of 16 to 22 million.<sup>7</sup> However, the goals of the FP/MCH Project are more specifically stated in the fifth five-year plan. In addition to bringing about an equilibrium between resources and population growth and improving the health of mothers and children, the Project must attempt to reduce the crude birth rate from 40 to 38 per thousand population and to reduce the infant mortality rate from 200 to 150 infant deaths per thousand live births during the plan period.<sup>8</sup>

The FP/MCH Board sets policy of its Project and is responsible for Project activities. Some of

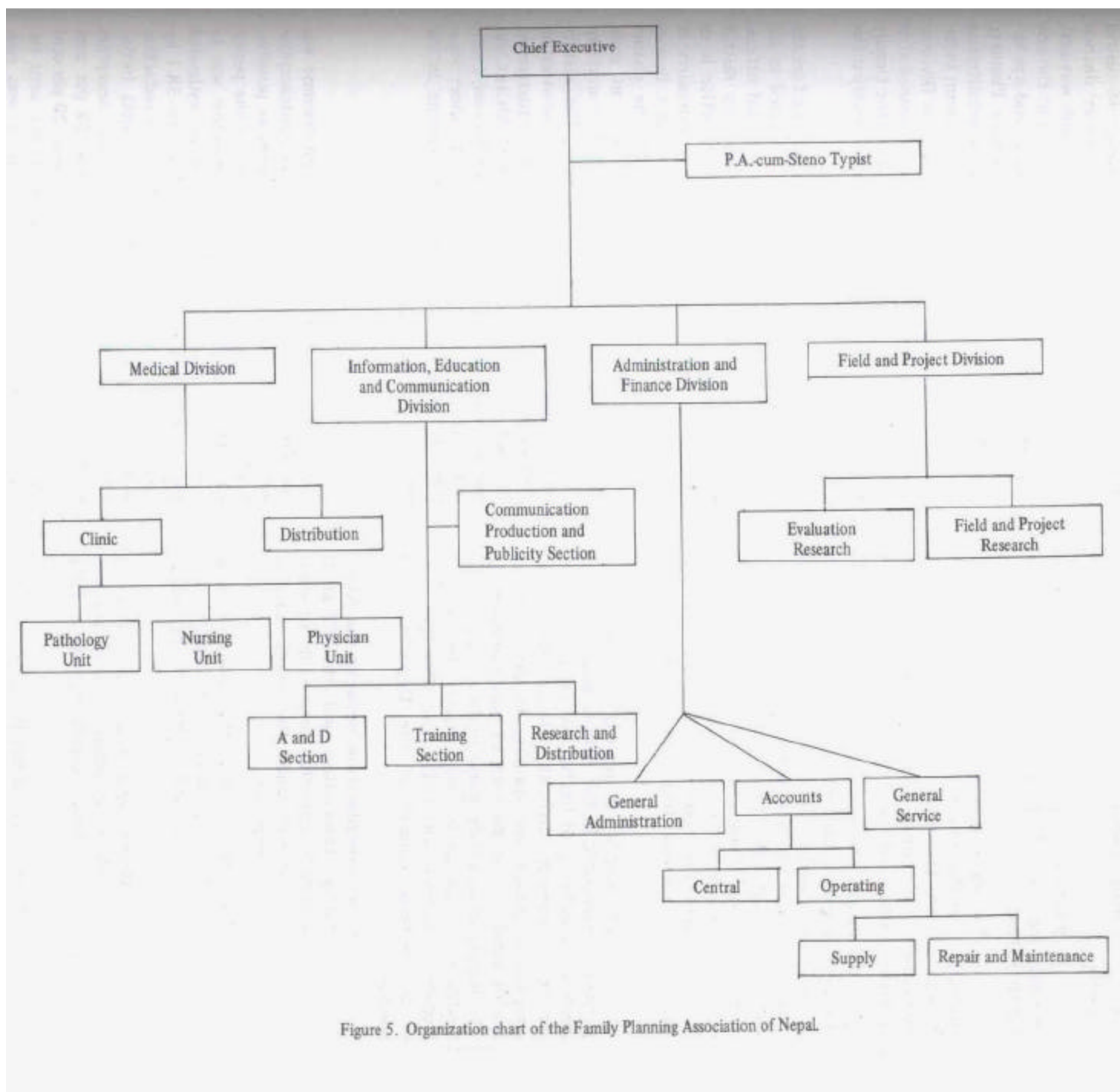


Figure 5. Organization chart of the Family Planning Association of Nepal.

the noteworthy policies of the Board are as follows:

(a) Paediatric, ante-natal, and maternity services are viewed as essential parts of the FP/MCH Project;

(b) Inclusion of Population education in the curriculum of the educational system of Nepal is viewed as very important since the future target population for family planning would be the current primary and secondary school children;

(c) Proper planning and evaluation of family planning activities have been hampered by a lack of adequate baseline information on levels and patterns of fertility and mortality, as well as on knowledge, attitude, and practice of family planning. The Board therefore approved the setting up of a central research-cum-training centre in Kathmandu for carrying out KAP, mortality and fertility surveys during the fourth five-year plan period.

(d) The scarcity of medical and paramedical personnel, especially in the remote areas of Nepal, renders the delivery of health and family planning services extremely difficult. Hence, the Board adopted a policy for training locally recruited health aides, i.e., at the level of paramedical staff. The supply of auxiliary nurse midwives and public health nurses is to be met mainly by training Nepalese students in India and Pakistan and in the nursing schools of the Department of Health;

(e) Better co-ordination between the Nepal Family Planning Association and the FP/MCH Project is extremely important especially in some basic policies that will guide the whole national family planning programme;

(f) The Board adopted the policy of using paramedical staff to deliver contraceptive and

MCH services and to utilize medical personnel for back-up services.

(g) The Board approved the policy of providing the following immunization services in the children's clinic: smallpox, BCG, DPT and polio.

The central office of the Project is situated at Kathmandu. National programmes as chalked out by the Board are launched through four regional offices situated in Nepalgunj, Pokhara, Kathmandu and Dharan, and through 46 district offices (excluding support to six more districts provided in the form of integrated health services). In charge of the programme execution at the central office are six specialized divisions and one section. The specialized divisions include Planning, Research and Evaluation Division; Administration Division; service Division; surgical Division; Information, Education and Communication Division; and Training Division. Each division is looked after by the Chief of the Project assisted by the Deputy Chief. The internal Audit Section is directly under the Chief of the Project (figure 6).

Also responsible to the Project Chief are the regional medical officers who are located in the four regional offices. Under the regional offices, there are 40 district offices headed by district family planning officers. A district office is an administrative office that oversees provision of family planning services to a whole district. Besides the district family planning officer, the district staff consists of public health nurses, an auxiliary health worker (a paramedical), auxiliary nurse midwives and a health aide. The district office does little clinical work, concentrating instead on the administration of the programme. In each district, there is a district FP/MCH Committee with the Senior Medical Officer as Chairman. The Committee is required to meet regularly to review the FP/MCH programme in the district.

### 3. Target Setting

When the family planning programme was launched, the objective was to offer contraceptive services to as many married couples as possible. A phased three-year plan was made for the period 1967-1968 to 1969-1970. The objective was to reduce the crude birth rate from an estimated 39.1 per thousand per year in 1967 to 38.1 by July 1970. It was estimated that such a reduction

would imply the prevention of 13,000 births. This target was to apportion the acceptors according to the following methods: 50 per cent for loops, 25 per cent for sterilization, 20 per cent for condom and the remaining 5 per cent for contraceptive pills. After one year it was considered almost impossible to fulfill the target in terms of the stated contraceptive delivery programme goals. Thus, the programme target was

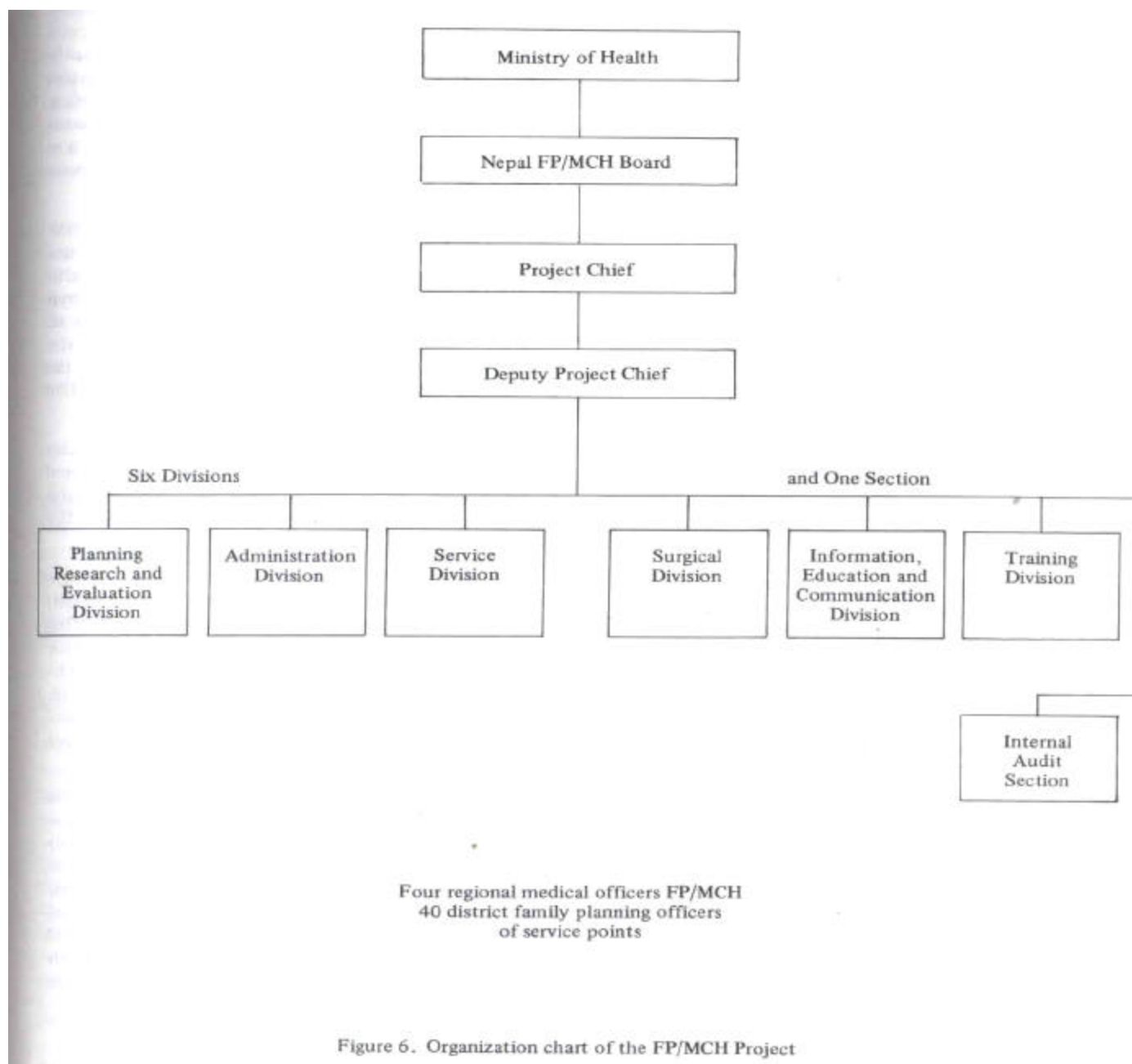


Figure 6. Organization chart of the FP/MCH Project



revised to offer family planning services to 16,000 married couples in the year 1969-1970. Since then, the target has been established to offer family services to specified numbers of couples.

In the fourth five-year plan, the target was to offer family planning services to 15 per cent of married couples by the end of 1974-1975, which amounted to a total of 312,000 married couples. This target was revised to 13 per cent on the basis of a mid-term evaluation. However, the original target of providing services to 15 per cent of the couples was achieved.

After establishing the programme target at the national level, targets are set at the regional and district levels. The allocation of the national target at the district level is carried out by looking at the achievements of all the existing clinics for the past two consecutive years, the number of clinics to be opened during the period for which the target is to be made and the number of staff that will be available. The target at the regional level is determined by totaling the targets at the district level.

In the fifth five-year plan (1975-1980), a demographic target rather than a service target has been set. The target aims at a reduction of the crude birth rate from 42 to 38 per thousand of the population. Demographic calculations indicated that this could be achieved if approximately 13,000 births were prevented in each of the last four years of the fifth five-year plan. From the service statistics generated and the rather limited and possibly inaccurate fertility records available at the beginning of the five-year plan, it was estimated that, given the contraceptive acceptors mix, it would require some 65,000 effective contraceptors to prevent 13,000 births annually.<sup>9</sup> Methods available were vasectomy and tubectomy (Laparoscopy), IUDs, and Depo-provera, and oral pills. Condoms were freely available but were not included in the list of effective methods since more emphasis was to be placed on other contraceptive methods.

The fifth five-year plan also aims at a reduction in the infant mortality rate from an estimated 200 per thousand live births to 150 per thousand live births during the plan period. As there was no appropriate index of the level of mortality rate, a survey covering a limited population of 20,000 was undertaken to obtain information on child mortality, general mortality, maternal mortality and fertility to be used in planning MCH services for the future. For purposes of the fifth plan, some estimates of infant deaths and their causes were generated on the basis of the best information available. These estimates indicated that about 98,000 Nepalese infants die each year.<sup>10</sup>

The demographic targets set in the fifth plan are translated into action by providing contraceptive services to 700,000 women, health care including immunization to 500,000 children under 5 years of age, and maternal services to 100,000 mothers. The targets indicated that the Project should increase the effectiveness of the existing programmes directed at mothers. The following guidelines were set:

- (a) A wider interval between pregnancies would achieve both psychological and nutritional advantage to the infant; therefore, information and services on the planning of families and the spacing of pregnancies should be expanded;
- (b) Knowledge and skills on rehydration administered by the mother would help the infant recover from diarrhoeal crisis, and water boiling (for infants and small children only) might reduce some environmental threats to the infant. The FP/MCH Project has undertaken a vigorous campaign to educate mothers in the knowledge and skills necessary to provide rehydration to children with diarrhoea;
- (c) The death rate from acute communicable diseases such as diphtheria, pertussis, tetanus, measles and tuberculosis is not known but probably constitutes about 20 per cent of all infant deaths. Unfortunately, the cold chain

(refrigeration) essential to the storage of most immunological sera is available in only a few districts, and until this facility is widely available, a national immunization campaign utilizing DPT, will not be possible;

(d) While some 30 per cent of children suffer from malnutrition, this is not always due to non-availability of necessary foodstuffs. Often, adequate foods are available or could be grown locally to overcome the malnutrition exhibited by both mothers and children. Panchayat health aides are given particular training in the presentation of nutrition education in the home with emphasis on locally available protein, calcium and iron-rich foods. Some suggestions on food preparation are also made;

(e) While environmental factors are undoubtedly responsible for part of the morbidity and mortality of children, it does not seem possible to embark on any major environmental measures apart from a co-ordinated community effort. However, FP/MCH workers are encouraging mothers to boil a small amount of water each day for the use of children under 5 years of age for drinking only.

#### 4. *The Delivery System*

In Nepal, family planning services are provided free of charge by the FP/MCH Project and the Department of health, both under the Ministry of Health. As noted earlier, the FP/MCH Project is the principal controlling agency for family planning and maternal and child health at the national level and provides services through clinics and through a field delivery programme.

The family planning and MCH services are provided through 457 clinics in the country. A FP/MCH centre provides a FP/MCH clinic to serve primarily the surrounding population. Each family planning clinic is usually in the health institution with staff designated from the project. The paramedical perform both MCH and FP activities. If a public health nurse is present, she

will insert IUDs and distribute pills in addition to running the MCH programme. The auxiliary nurse midwives and the auxiliary health workers also work in MCH but lack the degree of competence of a public health nurse. By and large, the paramedical run the family planning clinics, prescribe pills, prepare patients for vasectomies and distribute condoms. In the case of pills, if contra-indications are present, the case is referred to a doctor. In addition, motivation and follow-up activities are carried out by the staff in the field.

The clinics are presumed to serve an area within a radius of three miles on the average, though in each case the area served is affected greatly by natural terrain and communications. In addition to the clinic-based approach, a series of mobile clinics are organized either for general family planning services regularly or for terminal methods of family planning in different parts of the country.

"Unique to family planning in Nepal is the considerable use of helicopters and STOL (Short Take Off and Landing) aircraft. Because of the mountains and the absence of roads, air support is often the only way to avoid treks of several weeks. By utilizing such services, personnel from Kathmandu keep track of district operation, supply the district offices, and answer special needs by, for example, establishing vasectomy comps."<sup>1</sup>

During the early years of the family planning programme, services were delivered only through clinics, but it was soon discovered that most village people were not willing to come to clinics to get family planning services. Even though family planning clinics were located in health posts, health centres and hospitals where most people go for treatment, they still did not take advantage of the availability of family planning services at the clinic.<sup>12</sup>

Nepalese planners recognized this phenomenon early in their programme development. Door-to-door services were provided on an experimental basis in two districts by deputing one health aide in each panchayat. This seemed to work better in regard to acceptance and continuation of the family planning method. Subsequently, family planning and maternal and child health services were taken to the homes of the people in a large number of panchayats. One or two health aides were placed in each panchayat, and more emphasis was laid on supervision.

"The field delivery of services added an entirely new dimension to the family planning programme. This effort began the long process of carrying the message and means of fertility regulation directly to the people of Nepal. For the first time, a serious campaign was launched which was designed to effect fertility behaviour through social change techniques. This campaign is now the major family planning effort. Clinics presently serve mainly to provide MCH services once or twice each week. Their role in providing family planning services has been largely relegated to the re-supply of a few continuing clients".<sup>13</sup>

##### 5. *Programme Personnel*

The implementation of the national family planning programme, both at the clinic and field levels, depends on over 600 health aides, about 100 auxiliary health workers and approximately 40 assistant nurses and midwives. These are the workers who provide most of the manpower for running the FP/MCH and family planning clinics and all the manpower for the family planning field programme. The Project also employs a few staff nurses and public health nurses who work mainly as clinic supervisors. In addition, there are the supervisory and administrative personnel whose major role is to give support to the clinic and field workers.

The key worker in the Nepal family planning programme is the health aide, since he or she is the only one who does most of the home visiting. The concept of the health aide was newly introduced when the FP/MCH programme began. The reason for creating this new category was to expedite the selection and training of workers. A trainee should be at least 18 years of age and should have a minimum qualification of eighth grade education. These criteria can be met relatively easily and since training lasts only six or seven weeks, it is possible to train a fairly large number of workers to do family planning work in a relatively short period of time.

A health aide is trained in both clinic and field programmes, the main emphasis being on the practice of skills required for assuming an effective clinic and field role. Upon completion of training, a health aide is expected to be able to inform a prospective client about all the family planning methods and MCH services offered through the programme; to fill out the various forms that are required to register clients and record the results of work done both in the clinic and in the field; and to dispense both MCH and FP medicines and give instructions how they should be used.

As noted earlier, the implementation of the family planning programme depends largely on the health aide who is the grassroots level family planning field worker. Any degree of success towards changing Nepalese fertility behaviours, at least in the near future, will therefore depend primarily on their efforts.

"Building the programme on health aides has several advantages. As local residents, they know local customs, leaders and dialects. Recruits are available in numbers large enough to build a national programme. Female health aides after several years of successful experience can be upgraded into auxiliary nurse midwives. Two major problems in using health aides are their lack

of stature within Nepali society and their bashfulness, both consequences of their young age."<sup>4</sup>

The auxiliary nurse midwife is the lowest level regular female health service worker. This category of worker was again born out of the reality of the Nepalese situation. For purposes of delivering health services, there was a need for a large number of female health workers who could be trained fairly quickly in the delivery of basic MCH and midwifery services. The minimum educational requirement (eighth grade) for this worker is also necessarily low because of the very limited number of Nepalese women who have completed several years of formal education

The auxiliary nurse midwife undergoes training for a period of about two years, the focus being on basic health with major emphasis on curative, MCH and midwifery skills, and limited emphasis on preventive medicine. Their family planning orientation constitutes only a very small proportion of their total training and does not include field delivery of family planning services. On completion of training, the auxiliary nurse midwife is expected to assume responsibility for running an MCH clinic or to work in such a clinic in co-operation with other service health personnel such as auxiliary health workers, nurses, public health nurses and physicians; to supervise health aides both in the clinic and in the field; and to perform pregnancy examination and delivery.

The auxiliary health worker is the male counterpart of the assistant nurse midwife. His status, while theoretically equal to that of the assistant nurse midwife, is in fact slightly higher. His training lasts for two years and the minimum educational qualification required is successful completion of the tenth grade. The training consists of basic health care with major emphasis on curative medicine and the skills required for running a health post clinic. Limited training is also given in preventive health care while

exposure to family planning is very short. On completion of his training, the auxiliary health worker is expected to perform all the tasks assigned to the health aides and assistant nurse midwives, and assist in performing vasectomy operations.

The family planning officer (FPO) is the senior FP/MCH worker in the district, his role being both technical and administrative. The minimum educational qualification for recruitment as FPO is a bachelor's degree. The training which lasts three months, covers all aspects of district level FP/MCH activity, including training in contraception, administration, finance, communications, evaluation and clinic and field operations. The duties of FPO include co-ordination of district FP/MCH programmes; supervision of clinic and field programmes; administration of all aspects of the programme including an evaluation of the progress of the programme, and maintaining a liaison with other members of the district development and political community.

## 6. *Training and Manpower Development*

The importance of building up a cadre of trained personnel for the successful implementation of the programme was recognized from the inception of the programme. Hence the training of family planning field-workers was undertaken by the training division of the FP/MCH Project. However, during the year 1975-1976, the mode of training was modified as follows:

- (a) A group of trainers was established;
- (b) Regional training centres were developed;
- (c) All types of FP/MCH staff were trained at the district level; and
- (d) Some training assistance was provided to other government agencies.

The development of training officers received considerable help from the training specialist within the Berkeley team. Ten people were

selected for training as trainers and they were given four months of intensive preparation in a village setting. The theoretical base for the training was the social interaction model of human learning. People learn most from their own experience and least from the experience of others. This model required that the trainers be exposed as far as possible to the work of the health aides, who constituted the majority of the family planning field workers. The experience was structured so that the trainers could operate as trainees, with similar status under similar conditions. This process was followed by a close analysis of the experiences encountered, with special emphasis on the levels and problems of communication with villagers and devising a culture-based training programme. On completing the programme, the trainers provided a course for health aides utilizing the devised methodology. This course is provided under the guidance of the training specialist who conducts frequent sessions with trainers on the effectiveness of the approach on a village basis.

The earlier model of training was centralized in Kathmandu. This highly urban environment was deemed atypical of the work situation of most trainees and emphasized knowledge rather than the socio-cultural context wherein the trainee must operate. Today, the training centres are situated in three development regions in Nepalgunj, Dharan and Pathlaiya.

Primary emphasis in training was given to the training and retraining of health aides. The FP/MCH Board gave authority to recruit 300 more health aides to bring the total strength nationally to 930. During the year 1975-1976, 319 health aides were trained in the regional training centres.

A second important aspect of training was the development of a large cadre of supervisors who would provide supportive supervision to the health aides. During the year, 60 supervisors were given training. Two weeks of refresher training

were given to 103 health aides drawn from many districts. Fourteen FPOs were also trained during the year. Other types of training conducted in 1975-1976 included a one-week course for more than 100 traditional midwives as part of the activities of International Women's year 1975.

Two seminars for rural physicians were held in the western development region under the guidance of the regional medical officer FP/MCH. Seventeen physicians attended this seminar. The more effective techniques of vasectomy were demonstrated by the zonal surgeon in this course.

Over the past few years, nine nurses have been trained to insert IUDs at the Down State Medical Centre in New York after which in-country training of nurses on this procedure was undertaken. Over 20 nurses were trained to insert IUDs in 1975-1976.

#### *7. Information, Education and Communication*

The information, education and communication (IEC) component is very important in disseminating knowledge about family planning. However, diffusion of family planning messages among Nepalese people has been rendered difficult by a number of factors such as the predominance of rural population, prevalence of mass illiteracy, ignorance and strong adherence to superstitions. Besides, the multiplicity of ethnic groups and castes<sup>15</sup> have further compounded the difficult task of information, education and communication in the country.

The IEC process focuses in two directions. First, it tries to educate those opinion leaders whose positive support is necessary for changing the behaviour of the village people, and secondly, it provides direct information about family planning and contraception to fertile couples living in the area. This bi-level approach is, of course, extremely complex, involving all the varied intricacies of human interaction. In regard to

politicians and opinion makers, the family planning staff establishes personal contacts, works with them and wins them over to family planning. Community leaders are also reached through newspapers, radio, seminars and a monthly journal. The programme for the fertile couples employs mass media, and personal contacts.

Since the literacy level of the people is very low, the radio is the most important mass media used in the programme. The FP/MCH Project and the Family Planning Association produce 15 minute bi-weekly programmes on the FP/MCH theme, and these programmes are broadcast over Radio Nepal. As well as these 15 minutes programmes, there are about 18 spot announcements each week over the radio on the same theme. Although only one radio exists per 300 persons, the audience available at a given time is greater than with other media.

Since thousands of Nepalese are employed in the British Gurkha regiment in Hong Kong, a special Nepali Radio programme has been arranged for them in Hong Kong. This programme includes some of the FP/MCH tapes and it is hoped that the Gurkhas will become effective agents of social change in family planning on their return to Nepal. Written materials are also made available to the Nepalese soldiers out of the country with the British regiment.

Posters, calendars, a bi-monthly magazine, and pamphlets are also used to create an awareness of family planning among the general public. Films are also being used, both by the FP/MCH Project and the Family Planning Association.

Table 40 gives detailed information about IEC activities of the FP/MCH Project in the year 1975/76.

As noted earlier, mass media only supplement the personal contacts of family planning staff with the general population. As a preliminary

Table 40. List of media provided by the Information, Education and Communication Division, 1975/76

Items	Distribution
Pamphlets	53370
Pariwar Magazine	48000
Cartoon booklet	10500
Hamro Pariwar	10000
Poster	17980
Calendar	17000
Population seminar book	500
Press release	83 times
Film show	153 "
Radio programme (15 minutes)	105 "
Spot announcement	898 "
Exhibition	10 "
Seminar for Family planning officer	1 time
Pre-camp motivational work	5 times
Slide show	4 "
Display board reprint	20 "

to home visiting, couples in the locality are surveyed<sup>16</sup> to determine the need for family planning. Once priority couples are identified, individualized motivational work through home visiting begins.

When the field-worker meets a potential family planning acceptor, his education/motivation approach varies depending on his perception of the client's needs. His perception may vary all the way from the person who is hostile towards family planning to the person who is ready to accept. The approaches used by the workers include:

(a) The MCH approach: workers emphasize the availability of MCH services at the nearby MCH clinic. This approach is often used when the client has children who are ill. Family planning is discussed, if it seems appropriate, *after* the potential client has been satisfied that there is help for his/her sick children at the MCH clinic.

(b) The family planning approach: workers emphasize the need for the potential client to practice family planning. They usually recommend a particular method commensurate

with the client's family situation and contraceptive needs.

(c) The economic approach: this approach is used more often with men than with women. The worker stresses the economic burden of having more children and how the practice of family planning can help alleviate this burden.

(d) The opportunity approach: the worker stresses the greater opportunity for all members of the family, but especially education for the children, if the couple practices family planning.

(e) The inheritance approach: this approach stresses the notion that the more sons a family has the more division of the land and other property there will eventually be.

(f) The nation/society approach: the worker emphasizes the need for people to practice family planning because it will be beneficial to the nation and to society. This approach is seldom used with ordinary villagers or women. It is more often used in discussions with political leaders and other influential people.

(g) The counter fate approach: many people counter a worker's comments on family planning by saying that bearing children is determined by God and fate, i.e., there is nothing that can be done about it. The worker tries to counter this by emphasizing that God also wants the children to be healthy and happy and would approve of people taking steps to control fertility.

These approaches are, of course, never as clear-cut as outlined above. A worker may use several approaches in one visit to a client. This breakdown simply lists the major areas of concern that workers use in their education/motivation programmes in their assigned areas.

In order to utilize the approaches described above most effectively, the worker also needs educational materials and contraceptives for

persons who wish to begin using them. When going to the field, workers carry colourful descriptive pamphlets about each of the four major programme methods (pill, condom, IUD and vasectomy). They carry pills and condoms and an acceptor's registration card which is filled out on each new pill client. They carry appointment cards which are given to clients who wish to go to a FP/MCH clinic for either family planning or MCH services, or both.

With a view to increasing the probability of success of education/motivation in an area, workers are encouraged to remain in a single assigned area at least for a period of one year. It is believed that one of the most important factors which influence the acceptance of family planning in an area is the people's perception of the worker who delivers the service. In order for the worker to be well known and accepted in his area he must devote much effort over an extended period of time. In fact, every effort is made by the FP/MCH Project to select workers for training only from those areas to which they will be assigned after the training.

## 8. *Family Planning Methods*

The programme offers four contraceptive methods: vasectomy, IUD, pill and condom. In the Maternity Hospital in Kathmandu, female sterilization is practised only in connection with gynaecological and obstetric cases.

Vasectomy was introduced in Nepal in the late 1960s and continues to be a popular method of fertility control. It was provided mainly in temporary camps, many of which were served by mobile teams using helicopters or STOL aircraft. Today, vasectomy services are becoming more widely available in clinics and health centres. Two-thirds of all sterilization acceptors are men. In fact, vasectomy is so popular that in many Nepalese villages "family planning" is synonymous with "vasectomy".

The oral contraceptive is also quite popular. There is a liberal oral contraceptive distribution programme. Oral contraceptives can be issued by all project staff, including health aides, provided the responses of the clients to seven indicator questions are satisfactory. If the patient is suspected of having one or more of the seven symptoms, she is encouraged to use another method. If the woman still prefers to try the pill, she is referred to a doctor for prescription. The number of cycles distributed at a time is left to the discretion of each worker. Generally, up to three cycles are distributed at a time to new acceptors, depending on the distance between the client's home and the clinic.

In the FP/MCH clinics, all contraceptives are provided free of cost. For each vasectomy and laparoscopic sterilization, a fee of twenty rupee (\$US 1.60) is paid to the doctor while another twenty rupees and ten rupees are distributed among other staff involved in laparoscopic and vasectomy sterilization respectively. Doctors also receive five rupees for each IUD insertion. There are no other diffuser incentives and no acceptor incentives. Condoms and pills are distributed to some authorized shops which sell them to the clients at a subsidized price of 50 paisa (.04 US cents) for each packet of pills and a dozen condoms. The contraceptive pills and condoms are a gift to His Majesty's Government of Nepal by the United States Agency for International Development. Recently, a contraceptive retail sales project was started under the Nepal FP/MCH project to make contraceptives available throughout the county. No customs or excise duties are imposed on contraceptives entering Nepal.

## **C. Family Planning Achievements**

### *1. Evaluation System*

Regular evaluation of the various activities is very essential for the smooth and effective implementation of the family planning

programme. The collection of reliable and adequate data their processing and analysis, and the feedback of findings are considered indispensable for the efficient functioning of the family planning campaign.

The Research and Evaluation Division of the Nepal FP/MCH Project has in recent years been collecting the needed base-line data for evaluating the programme. In the initial phase of the family planning programme, the evaluation activities were concentrated mainly on generating and analyzing service statistics. Most of the data were obtained from the family planning record, a card filled by the FP/MCH centres for each acceptor of family planning services. A copy of each new record is sent monthly to the Evaluation Division. The record covers most directly relevant types of demographic and social information and it also includes questions on medical history, mainly used to identify pill contra-indications. The centres also maintain a register for recording every visit made by the clients and, in the case of pills or condoms, the quantity supplied. The centres are required to supply monthly returns of the total number of new acceptors by method and of pill cycles and condoms distributed.

Today, the evaluation of the family planning programme in Nepal cover four aspects:

- (a) Continuous monitoring to determine whether national targets have been fulfilled;
- (b) Evaluation of the effectiveness and efficiency of the ongoing programmes at various levels.
- (c) Conducting periodic surveys to ascertain what is happening to the programme and how to improve the programme;
- (d) Analyzing routine statistics generated at the clinic level.

As was noted earlier, during the early years of launching the family planning programme, the objective was to offer contraceptive services to as many married couples as possible, with a view to



bringing about a reduction in the crude birth rate from 39.1 in 1967 to 38.1 by 1971. This target was to be achieved by encouraging 50 per cent of the couples to use loops, 25 per cent vasectomy, 20 per cent condoms and 5 per cent pills. After one year, it was found that it was almost impossible to fulfill the target in terms of the contraceptive delivery programme. Hence the target was revised to offer family planning services to 16,000 married couples in 1969/70. Since then, the target has been established to offer family planning services to a specified number of couples.

Evaluation of the ongoing programme is done mainly at two levels: district level and central level. At the district level, the officer-in-charge will collect reports from individual workers and clinics and analyse the data to ascertain the progress made in regard to recruitment of acceptors and the continuation rates of acceptors. This will enable him to boost motivational and follow-up visits in the needed areas. Besides monitoring the progress in each district, the central office processes, tabulates and analyses the data to ascertain the national achievements. Several evaluation indices are computed in respect of district, regional and national activities bi-annually. The results are sent to the regional and district offices as feedback.

*Ad hoc* surveys are also conducted to collect additional information that will throw light on the progress of the programme. For instance, in 1973-1974 a nation-wide acceptor survey was carried out to learn how married couples accepting family planning methods were progressing, that is, what kind of side effects they were experiencing; how long they were continuing the

methods; reasons for terminating the methods, etc. In 1974-1975, KAP and fertility surveys were conducted in four districts to gather basic information on the family planning programme as well as base-line demographic data.

The analysis of routine statistics is largely concerned with obtaining a clear picture of the characteristics of family planning acceptors – age, literacy level, number of children, economic background etc. This analysis helps the programme to identify the socio-economic groups adopting family planning methods and to gear the programme to meet the needs of these groups as well as to cover the other groups.

## 2. *Trends in Family Planning Acceptance*

The achievements of the family planning programme in terms of acceptors by methods are shown in tables 41 and 42. It will be seen that, initially, the IUD was the predominant method accepted. In the first year of programme implementation, 98 per cent of the acceptors had the IUD inserted. Over the subsequent years, IUD acceptors have declined both numerically and in relative importance. In 1972/73, IUD acceptors constituted only one per cent of total family planning acceptors and this proportion remained constant until 1976/77. This was probably due, on the one hand, to a shortage of trained female staff to perform insertions and, on the other, to severe side effects which generated negative rumours in which the social factors were as important as the medical ones. It is also probably due to the fact that most women accept examination and treatment only by lady doctors, who are in short supply and concentrated, in any case, mainly in the Kathmandu valley.

Table 41. Acceptors in the family planning programme by method

Fiscal year	IUD	Vasectomy	Pills	Condom	Laproscopy	Injection	Total
1966/67	1806	-	13	33	-	-	1852
1967/68	2614	1062	200	1256	-	-	5132
1968/69	1183	3292	1355	1914	-	-	7744
1969/70	1109	3888	10263	14480	-	-	29740
1970/71	711	4441	13496	18735	-	-	37383
1971/72	1162	3900	15668	22908	-	-	43638
1972/73	607	4161	24056	35713	558	-	65095
1973/74	862	5166	27141	52075	810	25	86079
1974/75	1110	3702	26943	65814	662	81	98312
1975/76	1635	9169	37640	87876	2162	152	138634
1976/77	1149	10953	33250	74782	5422	976	126532
Total	13948	49734	190025	375586	9614	1234	640141

Source: Nepal FP/MCH Project, Evaluation Division.

Table 42. Contraceptive mix in a given year: percentage of acceptors by method accepted

Year	Method						Total	Number of acceptors
	IUD	Vasectomy	Pills	Condoms	Laparoscopy	Depo-provera		
1966/67	97.5		0.7	1.8			100	1852
1967/68	50.9	20.7	3.9	24.5			100	5132
1968/69	15.3	42.5	17.5	24.7			100	7744
1969/70	3.7	13.1	34.5	48.7			100	29740
1970/71	1.9	11.9	36	50.2			100	3743
1971/72	2.6	8.9	36.2	52.3			100	43838
1972/73	0.9	6.4	36.9	54.9	0.9		100	65095
1973/74	1	6	31.5	60.5	0.9	0.1	100	86079
1974/75	1.1	3.8	27.4	66.9	0.7	0.1	100	98312
1975/76	1.2	6.6	27.1	63.4	1.6	0.1	100	138634
1976/77	0.9	8.6	26.3	59.1	4.3	0.8	100	126532

Source: Nepal FP/MCH Project, Evaluation Division.

Another factor accounting for the decline in the proportion of IUD acceptors is the increase in the proportion of condom acceptors.

The introduction of the more effective female sterilization through laparoscopy has been viewed as generating a greater demographic impact on the programme. A marked increase in the laparoscopic acceptors was observed between 1972/73 and 1976/77. With the limited number of services centres and skilled personnel to carry out the sterilization, there have so far been more than 9,600 laparoscopic sterilizations done in Nepal.

The injectable contraceptive known as Depo-provera was initiated in 1973/74 and was provided in only one village in Gokarna near Kathmandu on an experimental basis until the year 1974/75. It was then made available in other areas. An increasing number of females have been accepting this method.

It is clear from table 42 that a major contributing factor to the volume of acceptances has been the large yearly increase in condom users. Since 1970/71, 50 per cent or more of all new acceptors

have been condom users. The Family Planning Association relies even more than the FP/MCH Project on condoms, which is the method chosen by 79 per cent of all its acceptors. IUD acceptors have declined to the point where they constitute an insignificant percentage of new acceptors – approximately one per cent of the yearly total. Similarly, sterilization acceptors (vasectomy and laparoscopy) contributed about 13 per cent. The popularity of vasectomy has also dropped very substantially since the first year of FP/MCH operations. It is also important to point out that there has been a decrease in pill acceptors for the last seven years. Each year, approximately one third of all new acceptors were pill users and this percentage has declined to a fourth suggesting that there may have been a shift in the direction of acceptances toward other methods. Table 42 indicates that since 1973/74 there has been a slight decline in the percentage of new family planning acceptors who use the pills – from 37 to 26 per cent.

The trends in family planning acceptance of various methods by month of acceptance can also be seen in table 43. A seasonality in family planning acceptance seems to be evident. An increase in acceptance is noted in January to February, the start of the calendar year, particularly in sterilization acceptance.

### 3. *Characteristics of Acceptors*

a little lower than the continuation rate of pill users in the Republic of Korea in 1963 (38 per cent at the end of one year). The continuation rate at the end of 24 months and 36 months are respectively 19.8 and 13.2 per cent. In the Republic of Korea, the continuation rate of pill users at the end of 36 months was 12 per cent.<sup>17</sup>

#### (b) *IUD acceptors*

The cumulative number of IUD acceptors was 13,948 for the period ending 1976/77, and

#### (a) *Pill acceptors*

The cumulative number of pill acceptors up to 1976/77 is 190,225. The characteristics of pill acceptors as revealed by survey data and routine statistics are summarized in table 44.

It will be observed that, as shown by various studies, the mean age of pill acceptors is about 30 years and there have been hardly any changes in this average age over the years. Similarly, there have been no changes over the years in the average number of living children (about 3.6) and average number of living sons (2.0) of pill acceptors.

It can also be seen from table 44 that more illiterate females are accepting pills. On the whole, over three quarters of the pill acceptors were illiterate; this is to be expected since the programme will trickle to the lower socio-economic segment of the population with time progression. Seventy-one per cent of the husbands were reported to have been engaged in agriculture..

The continuation rates of pill acceptors at the end of specified ordinal years of acceptance is an important index of measuring the effectiveness of the programme. According to the national follow-up survey of family planning acceptors conducted in 1973/74, the continuation rate of pill acceptors at the end of one year was 36.7 per cent, which is

Table 43. Percentage distribution of family planning acceptors by month of acceptance, 1976/77

Month	condom	pills	Vasectomies	Laparoscopies	IUD	Depi-provera	Total
July/Aug	9.6	9.4	1.5	0.8	12.2	8.6	8.6
Aug/Sept	8.0	8.6	1.9	0.2	8.5	9.6	7.3
Sept/Oct	8.6	9.3	3.5	0.2	10.4	4.7	8.0
Oct/Nov	10.4	7.7	11.3	4.4	6.0	17.6	9.6
Nov/Dec	6.1	6.9	5.9	3.4	3.3	5.1	6.1
Dec/Jan	6.3	6.2	4.0	5.5	9.3	5.3	6.0
Jan/Feb	10.4	9.8	24.3	29.0	13.9	16.5	12.4
Feb/March	7.9	9.0	12.7	0.9	7.9	5.6	8.0
Marc/Apri	6.8	7.3	10.9	38.0	4.8	7.1	8.0
Apri/ May	7.5	8.6	5.2	14.1	9.2	6.3	7.9
May/June	10.1	9.3	3.2	1.8	4.6	7.1	8.9
June/July	9.3	7.9	15.6	1.7	9.9	6.5	9.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(74782)	(33250)	(10953)	(5422)	(1149)	(976)	(126532)

Source: Nepal FP/MCH Project, Evaluation Division.

Note: Numbers in parenthesis indicate the number acceptors.

Table 44. Characteristics of pill acceptors by year of acceptance, 1970/71 to 1975/76

Year	Sample size	Mean age	Characteristics					
			Average number of living children	Average number of living sons	Literacy (%)		Occupation of Spouse (%)	
					Illiterate	Literate	Agriculture	Non-agriculture
1970/71 <sup>a</sup>	9458	29.7	3.4	1.9	72.2	27.8		
1971/72 <sup>a</sup>	10829	29.9	3.6	2	75.5	24.5		
1972/73 <sup>a</sup>	1813	30	3.6	2	77.8	19.7		
1973/74 <sup>a</sup>	2015	30	3.6	2	78.8	18.5		
1974/75 <sup>b</sup>	692	31.9	3.9	2.1	82	18		
1975/76 <sup>c</sup>	2712	30.3	3.6	2	83.5	16.5	71	29

Sources: a P.L. Joshi, "Evaluation system of the family planning programme in Nepal", in *Proceedings of the Workshop Conference on Population, Family Planning and Development in Nepal*, Berkeley, California, 24-29 August 1975, p.223.

b "A report on national family planning acceptors follow-up survey 1973/74", Kathmandu, 1976.

c FP/MCH Project, Evaluation Division, "Socio-demographic characteristics of family planning acceptors during 1975/76".

Table 45. Characteristics of IUD acceptors by year of insertion, 1970/71 to 1975/76

Year	Sample size	Mean age	Characteristics					
			Average number of living children	Average number of living sons	Literacy (%)		Occupation of Spouse (%)	
					Illiterate	Literate	Agriculture	Non-agriculture
1970/71 <sup>a</sup>	493	30.9	3.9	2.2	75.5	24.5		
1971/72 <sup>a</sup>	422	30.2	3.7	2.2	68.2	31.8		
1972/73 <sup>a</sup>	490	30.5	3.8	2.2	65.1	34.9		
1973/74 <sup>a</sup>	688	30.4	3.6	2.0	62.5	37.5		
1974/75 <sup>b</sup>	101	30.2	3.9	2.1	67.3	32.7	49.5	50.5
1975/76 <sup>c</sup>	399	29.2	3.5	1.9	61.6	38.4	37.6	62.4

Sources: a P.L. Joshi, "Evaluation system of the family planning programme in Nepal", in *Proceedings of the Workshop Conference on Population, Family Planning and Development in Nepal*, Berkeley, California, 24-29 August 1975, p.223.

b "A report on national family planning acceptors follow-up survey 1973/74", Kathmandu, 1976.

c FP/MCH Project, Evaluation Division, "Socio-demographic characteristics of family planning acceptors during 1975/76".

their characteristics are shown in table 45. It will be seen that there have been slight changes in these characteristics over the years.

The mean age of IUD acceptors has shown a decline from 30.9 in 1970/71 to 29.2 in 1975/76. The average number of living children and the mean number of living sons also recorded a decline, the former from 3.9 to 3.5 and the latter from 2.2 to 1.9 during the period 1970 to 1976. While in 1970/71 over 75 per cent of the IUD acceptors were illiterate, the corresponding proportion in 1975/76 was only about 62 per cent. Compared to the pill acceptors, a lower proportion of husbands of IUD acceptors were engaged in agricultural occupations.

The continuation rate of IUD acceptors was found to be higher than those of pill acceptors. The 1973/74 national follow-up survey of family planning acceptors revealed that 43.3 per cent of the IUD acceptors discontinued use of the method 12 months after first insertion and half of the IUDs inserted remained *in situ* 12 months after first insertion. The discontinuation rate of IUD acceptors 24 months after first insertion was 43 per cent in the Republic of Korea in 1969 and this proportion increased to 51 per cent in 1971.

#### (c) Vasectomy acceptors

During the period 1976 to 1977, a total number of 49,734 male sterilizations was performed in Nepal. The characteristics of these acceptors at the time of their sterilization are presented in table 46.

The mean age of the vasectomy acceptor's wife was found to be 31.6 years in 1975/76. The mean number of living children for a vasectomy acceptor at the time of accepting the method was 4.7. Considering that the average family size is 6.2, the expected average number of births that could be prevented would be 1.5. Nearly two thirds of vasectomy acceptors were literate and there was hardly any change in this proportion over the years.

#### (d) Laparoscopy acceptors

The characteristics of laparoscopy acceptors are shown in table 47. As mentioned earlier, this method was started in Nepal only a few years ago, but the increasing number of laparoscopy acceptors every year is an indication of the wide acceptance of this method.

From 1973 to 1976/77, the mean age of the acceptors declined by one year, from 33.3 years to 31.8 years. The mean number of living children of the acceptors was around 5.0, and the mean number of living sons was 3.0. These

characteristics were similar to those of the vasectomy acceptors.

#### 4. Impact of Family Planning Programmes

The implied fertility rate derived from the

Table 46. Characteristics of vasectomy acceptors by year of Sterilization, 1970/71 to 1975/76

Year	Sample	Mean age of wife	Characteristics					
			Average number of living children	Average number of living sons	Literacy (%)		Occupation of Spouse (%)	
					Illiterate	Literate	Agriculture	Non-agriculture
1970/71 <sup>a</sup>	3270		5.4	2.9	34.5	65.5		
1971/72 <sup>a</sup>	2780		4.9	2.8	35.1	64.9		
1972/73 <sup>a</sup>	1353		4.6	2.8	32.3	67.7		
1973/74 <sup>a</sup>	1759		4.7	2.8	31.0	69.0		
1974/75 <sup>b</sup>	100	32.0	4.8	3.0	34.0	66.0	75.0	25.0
1975/76 <sup>b</sup>	1361	31.6	4.7	2.8	37.0	63.0	77.0	23.0

Sources: a P.L. Joshi, "Evaluation system of the family planning programme in Nepal", in *Proceedings of the Workshop Conference on Population, Family Planning and Development in Nepal*, Barkeley, California, 24-29 August 1975, p.223.

b "A report on national family planning acceptors follow-up survey 1973/74", Kathmandu, 1976.

Table 47. Characteristics of laparoscopic acceptors, 1973 to 1976/77

Year	Sample size	Mean age	Characteristics					
			Average number of living children	Average number of living sons	Literacy (%)		Occupation of Spouse (%)	
					Illiterate	Literate	Agriculture	Non-agriculture
1973 <sup>a</sup>	213	33.3	5.4	2.9				
1974 <sup>b</sup>	248	32.2	4.8	2.8	91.0	9.0		
1974/75 <sup>c</sup>	542	33.5	4.7	2.7	80.4	19.6	41.9	58.1
1975/76 <sup>d</sup>	551	32.5	4.8	2.6	69.8	30.2	54.0	46.0
1976/77 <sup>e</sup>	3757	31.8	4.6	2.7	79.5	20.5	78.2	21.8

Sources: a Robert Miller, "Laparoscopic sterilization camp, report No. 1: fact, impressions and some preliminary analysis".

b FP/MCH Project, "The second laparoscopic sterilization camp in Pokhara: some comparisons with the first camp" Kathmandu, Nepal.

c FP/MCH Project, "Preliminary findings of laparoscopic follow-up study 1973/74 conducted during 1974/75".

d FP/MCH Project, "Socio-demographic characteristics of F.P. Acceptors F.Y. 2032-33 (1975-76)".

e FP/MCH Project, "Profiles of the laparoscopic acceptors for the period 1976-77".

mean age of the sterilization acceptor and her parity coincides with the cumulative age-specific fertility rates obtained from the national fertility survey, i.e., by the time the women reaches the age of 30-34, she will have borne 5 children. Considering that the total fertility rate or the

completed family size is 6.0, only one child is averted by such an acceptance.

In the case of births expected to be prevented by oral contraceptives, condoms, IUDs and Depo-provera, the continuation rates of these acceptors

need to be taken into account. For purposes of this study, a rough estimate of births expected to be prevented as a result of these programmes has been made. While estimating the number of acceptors continuing the method at the end of one year, two years, three years, four years and five years,<sup>18</sup> continuation rates of acceptors by methods have been used wherever the rates are available. In other cases where these rates are not available, some realistic assumptions have been made. The continuation rates partly obtained from surveys are given in table 48.

A study of the effectiveness of health aides in recruiting and maintaining people on oral contraceptives<sup>19</sup> at panchayat or clinic service points showed that the continuation rates were higher for acceptors recruited by panchayat-based workers. Between 50 and 70 per cent of all acceptors from clinic-based services dropped out in the first three months for all age groups. This was true for both hills and Terai areas. Comparable drop-out rates for acceptors from panchayat-based services were 20 to 40 per cent in the first three months. It was assumed that this was due to a more effective follow-up service from the panchayat-based service points.

It has also been shown that the rate of birth prevention during the first five-year period was 0.35 per year per acceptor. Hence, this rate is applied to estimate the number of births expected to be prevented by number of acceptors continuously

Table 48. Continuation rates by method and duration of acceptance

Duration	(Percentage)			
	Pill	IUD	Condom	Depo-provera
End of one year	36.7 <sup>a</sup>	65.7 <sup>a</sup>	20.0 <sup>b</sup>	70.0
End of two years	19.8 <sup>a</sup>	50.0 <sup>a</sup>	10.0 <sup>b</sup>	55.0
End of three years	13.2 <sup>a</sup>	35.0 <sup>b</sup>	5.0 <sup>b</sup>	40.0
End of four years	8.0 <sup>b</sup>	20.0 <sup>b</sup>	2.5 <sup>b</sup>	20.0
End of five years	4.0 <sup>b</sup>	10.0 <sup>b</sup>	1.0 <sup>b</sup>	10.0

Sources: a FP/MCH Project, Evaluation Division, "A report on national family planning acceptors follow-up survey 1973-74", Kathmandu, Nepal, 1976.

b Assumed rates.

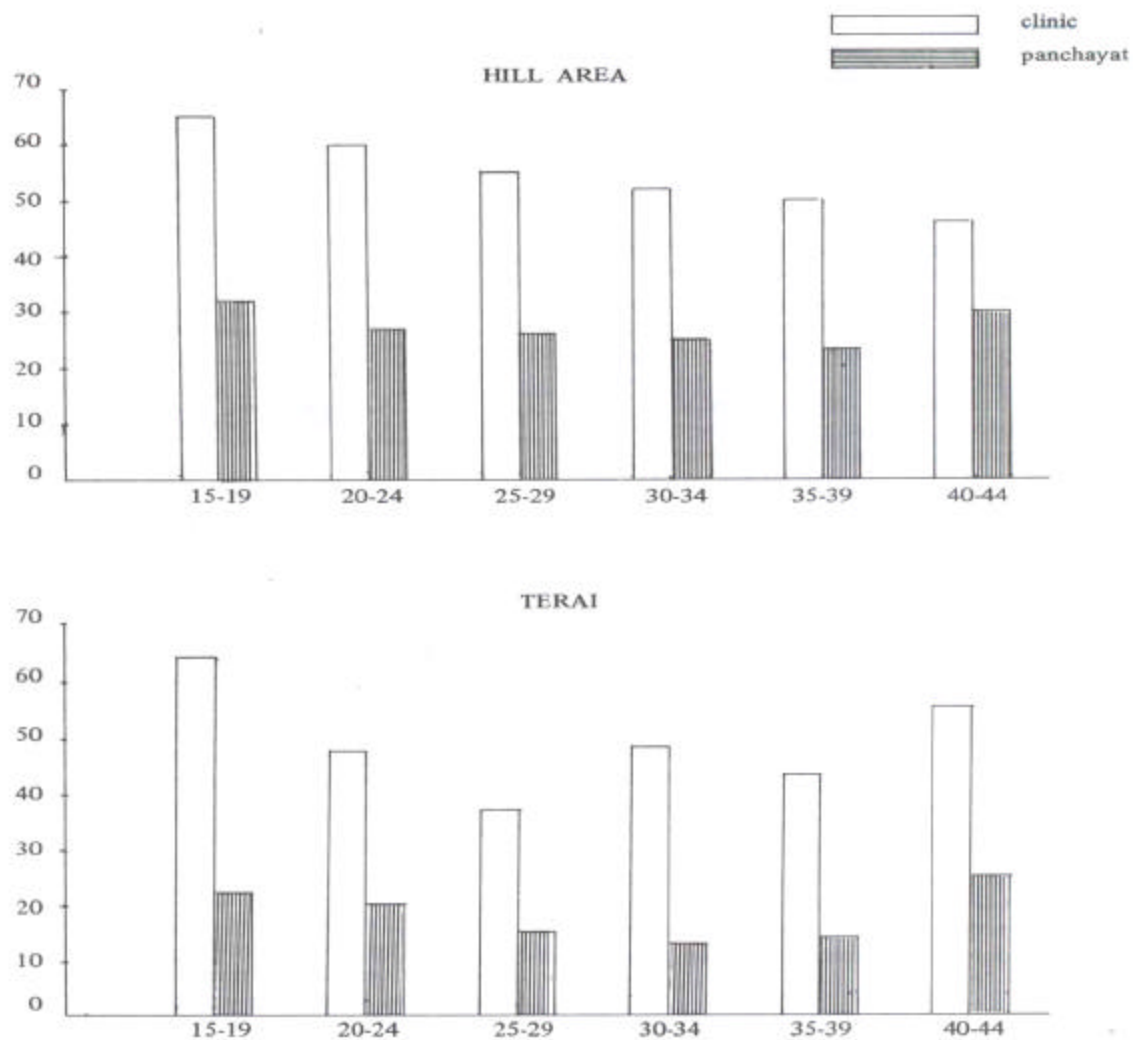
c K. Vaidya and R. Manandhar, "Field study of Depo-provera in FP/MCH clinic Gokarna village", FP/MCH Project, Kathmandu 1974.

using the method at the end of specified year. Table 49 shows that a total number of 174,025 births are expected to have been prevented by the family planning programme acceptors until 1976/77. If the crude birth rate of 42 per thousand remained constant, a cumulative number of 2,186,102 births over few years would have occurred (table 50). It would therefore appear that only 3.8 per cent of all births that would accrue over the 10-year period would have been prevented up to 1976/77. It seems that the 10-year programme did not generate a perceptible reduction in fertility for a number of reasons:

(a) While the number of new acceptors increased, acceptances were heavily weighted towards the less effective methods such as the condom. Over time, there was a shift in acceptance from IUDs, which have a high continuation rate, to condoms.

(b) There is a lack of shift in the age structure of the acceptors. Over the Years, acceptances were confined to the older (32-35 years) wives with high parity (4 to 5 children). Such a pattern of acceptance would not make a significant demographic impact as the completed family size is 6 and the number of births that can be averted is therefore only one.

(c) While there is an increase in sterilization acceptances over the 5-year interval, the acceptors were older wives who are close to the final state of childbearing (average age = 32 years and parity = 5).



Source: B.R. Pande and Kokilla Vaidya, *et. al.*, "An approach to the evaluation of effectiveness of health aides recruiting and maintaining clients on oral contraceptive", in *Proceedings of Workshop-Conference on Population, Family Planning and Development in Nepal*, University of California, Berkeley, 24-29 August 1975.

Figure 7. Percentage distribution of acceptors who dropped out within the first three months of acceptances by age group and type of provider



Table 49. Births expected to be prevented by family planning programmes up to the year 1976/77

Method	Acceptors (new)	Births expected to be prevented
Sterilization	59348	59348 <sup>a</sup>
pill	190225	54396
IUD	13948	8822
condom	375636	50617
Depo-provera	1234	842
All	640391	174025

a Since the sterilization acceptor has 5 children at the time of acceptance and knowing that the completed family size is 6, she is likely to prevent only one birth.

Table 50. Estimated population and births, 1967-1977

year	population <sup>a</sup>	Births <sup>b</sup>
1967	10469163	439705
1968	10730893	450698
1969	10999166	461956
1970	11274146	473514
1971	11556000	485352
1972	11844900	497486
1973	12141022	509923
1974	12444547	522671
1975	12755660	535738
1976	13074551	549131
1977	13401414	562859

a Assuming a growth rate of 2.58.

b Assuming a crude birth rate of 42/1,000.

#### D. Conclusions

During the past two decades, Nepal has evolved a comprehensive population policy aimed at moderating the rate of growth of the country's population to levels consistent with the requirements of national development, and at influencing the spatial distribution of the population to conform to the geographical distribution of the country's physical resources. The imperativeness for such policy need hardly be emphasized. The rate of population growth in country is very high, and given this high growth rate, the population of Nepal, now estimated at

about 13 million, will double in about 30 years. the pattern of dependency will also shift in manner unfavourable to the socio-economic development of the country. The increasing pressure of population not only worsens the already serious land/man ratio but also leads to severe deforestation and erosion problems.<sup>20</sup>

Nepal is one of the few countries in the world that have developed a comprehensive national population policy. Furthermore, it is also in a fortunate position in that there is a strong commitment to population policy at the highest levels of authority. There is a growing and genuine realization among planners, policy makers and administrators that Nepal's population problem is indeed serious and already affecting national developmental efforts.

In order to reduce the present high rates of population increase, the FP/MCH Project continues to make available fertility control services to the people of Nepal. It offers family planning services to the people through hospitals, health posts, health centres, panchayat-based centres, mobile camps and teams, and FP/MCH clinics. Commercial distribution of conventional contraceptives at subsidized rates is also done through pharmacies and chemists. In addition, the Integrated Health Project under the Ministry of Health has been providing family planning services on a door-to-door basis in some selected districts. The Family Planning Association also provides fertility control services to the people through clinics, mobile camps and several other programmes.

There are, however, several difficulties in expanding the family planning activities and meeting the demand for fertility control in Nepal. In the first instance, there is a lack of communication both in terms of geography and language. The geographical topography makes it difficult to reach the potential acceptors for delivery of family planning information and services. The linguistic variation hinders the

development of educational materials and training programmes and requires an increased and elaborate system of effort to reach the groups scattered in difficult terrain and speaking a variety of languages. Secondly, there is an acute shortage of trained medical and para-medical personnel to implement the family planning activities at all levels. One of the problems faced in regard to the recruitment and training of an adequate number of personnel is the lack of opportunity for career ladder development of health aides, junior auxiliary health workers, etc. Thirdly, the relatively less significant role of women in various decision-making processes and their relatively little participation in the newly emerging economic activities also hinders the promotion and expansion of family planning activities.

Despite these difficulties, Nepalese administrators have been experimenting with creative approaches to develop a national programme capable of reducing fertility in Nepal.

"Dominant among the strength of the family planning programme in Nepal is its general ability to fit technical problems to Nepali conditions. Examples of this are the combining of MCH services with family planning, the emphasis on paramedical in the absence of doctors, the liberal pill distribution policy requiring only paramedical screening, the use of all available means of transportation ranging from long-distance walking to air support, and the comprehensive educational and motivational programme.<sup>21</sup>