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SYMPOSIUM ON THE HEALTH ASPECTS OF HUMAN REPRODUCTION, FAMILY PLANNING AND POPULATION DYNAMICS

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ORGANIZATION OF SERVICES FOR FAMILY PLANNING CARE

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1. General assessment of family planning needs

1.1 Need of family planning from health viewpoint

The health aspects of fertility are a universal concern, and not confined to countries with over-population It has been established that pregnancy spacing is essential in order to allow for optimum maternal and child health, nutrition and child-rearing. Furthermore, from the health point of view the term "family planning" has a dual connotation. It is related to pregnancy spacing and the control of over-fertility on the one hand, but it is also related to the treatment of infertility and its consequent social and psychological implications.

Studies in many areas show a strong association between family size and mortality rates. Three relationships can be envisioned in this association. First, high infant mortality leads to insecurity with small family size and to demands for more pregnancies. Second, large families have more children than they can support adequately for survival. Third, those families that are better off and better educated tend to have both fewer births and fewer deaths. All three of these relationships have important implications for health and family planning, and need further quantification.

The excess infant and childhood mortality with frequent pregnancy is not so often from frank starvation as from a synergism between common infections and low resistance due to poor nutrition. Characteristically, these illnesses arise when an infant is weaned abruptly because of an intervening pregnancy. Low birth weight associated with inadequate pregnancy spacing and chronic maternal malnutrition is another cause of excess infant mortality and, on the other hand, children who survive the ravages of low birth weight and malnutrition when uncontrolled fertility exceeds family resources are more likely to suffer from inadequate physical and mental development.

Maternal death-rates increase sharply with large numbers of pregnancies. In areas characterized by high maternal mortality and high parity, a tenth of mothers may die eventually in child-birth. The excess of female mortality over male mortality during the reproductive age-group in these areas quantifies this loss. Maternal deaths must be measured broadly in terms of their effects on the health of the family.

Prevention of maternal morbidity from frequent pregnancies and continual lactation is yet another important need. Not only are repeated pregnancies a drain on maternal nutrition but they too often result in crippling pelvic pathology.

Abortion is also an important health concern. Today many hospitals are being flooded with septic and traumatic unqualified abortions. Many women choose to interrupt their pregnancies, with jeopardy to their own lives, rather than suffer the risks and consequences of further unwanted pregnancies.

The impact of family planning can be quantified not only by reduction in birth-rates but, in the same way that other health approaches are measured, in terms of number of maternal and infant deaths prevented. For example, in areas where the maternal mortality rate is estimated to be 10 per 1000 child-births and the infant mortality 150 per 1000, one can say that each 1000 births prevented result in at least 10 maternal lives saved and the prevention of 150 infant deaths. (Since those with excessive parity are a high-risk group, the actual risks are higher than these general figures.)

1 2 Fertility characteristics of the population

The fertile age range in women is usually considered to be 15 to 44 years in any given population In tropical countries the onset of ovulation and menstruation is somewhat later than in economically developed countries in the temperate zone. Even with early marriage, pregnancies before age 17 do not constitute a significant proportion of births, although they are a health concern because of increased hazards. About 5 per cent of couples suffer from primary sterility and an equal number lack sufficient fertility to need contraception. Because of poor nutrition, chronic infections and pathology resulting from repeated pregnancies, secondary infertility and early menopause are common. In a few tropical countries fertility appears to be low in all ages, in others it drops off rapidly after age 30 In most areas it is not significantly large beyond age 40, although again these late pregnancies, because of their relatively high risks, are a health concern

Given a population structure with a high birth-rate and a moderate death-rate, the number of married couples in the fertile age range constitutes about one-sixth of the population A deduction for absolute or relative infertility reduces this to one-seventh. In a similar population, those women who have had three or more pregnancies constitute a little more than half of the couples, say one-twelfth of the population. This number represents roughly the target group that might be interested in family size limitation, although those with less children must also be considered for spacing and for introducing possibilities for eventual limitation of family size.

In such a population less than half the women in the fertile age range may be found to be currently having ovulatory menstrual cycles, about 18 per cent. being pregnant, 30 per cent. having post-partum amenorrhoea, and 5 per cent not ovulating because of premature menopause and other reasons. The proportion with post-partum amenorrhoea is particularly high in areas where breast feeding is continued for as long as two years or more. Pregnancy during lactation may be further limited by malnutrition, taboos on intercourse and other factors. The gradual disappearance of the practice of prolonged breast feeding in urban areas and the improvement of nutrition may be significant factors in increasing the number of pregnancies.

In our representative population the number of women entering the fertile range each year is about 1 per cent of the population, and the number entering the group with three or more pregnancies is about 0.8 per cent. of the population These figures set long-term margins for the number of new couples to be considered by a family planning programme each year, after the backlog of potential acceptors has been managed.

TARGET POPULATION

1 000 000	Population
500 000	Women
200 000	Age 15-44
140 000	Potential fertile and exposed
80 000	Three or more pregnancies
50 000	Interested
40 000	Currently in need
20 000	Effective practice
8 000	Annual additional candidate couples

1.3 Knowledge of, attitude to, and practice of fertility control

Assessments of knowledge, attitude and practice are standard determinations of behavioural status in relation to fertility. The objectives of family planning efforts are to provide information to improve knowledge, to support an attitude more favourable to the health and well-being of the family and the community, and to help introduce more acceptable, effective and safer practices of fertility regulation Detailed discussion of knowledge and

attitude is beyond the scope of this paper, even though these considerations are fundamental to the health approach for fertility management. Only a few comments on health aspects of knowledge, attitude and practice will be included in this section.

1.3.1 Knowledge

Many people are still not aware that it is possible to regulate fertility and many others are vaguely aware that it is possible, but are ignorant of any specific effective methods. Calendar methods are often wrongly practised, allowing exposure during the fertile period of the cycle Misinformation and rumours about the IUD and the pill have been major problems in family planning programmes. Shortage of accurate information on these subjects of great interest is the basis of these widespread rumours. Vasectomy is confused with castration An enormous folklore has grown up on unscientific methods to control births.

1.3.2 Attitude

Attitudinal studies show that in most places a majority of couples are interested in planning their families in spacing as well as limiting the number of pregnancies. However, many who favour family planning are only in favour after having four or more children, including a couple of boys. Mauldin, summarizing these studies, found that the average number of children desired ranged from two in Central Europe to five or more in some parts of Africa and South-East Asia. High infant death-rates are an important factor in this attitude. Poor health also contributes to widespread fatalism which inhibits any kind of planning. The anaemic, washed-out mother who has seen half her children die is a difficult target for family planning

1.3.3 Practice of family planning methods

The third ingredient, the one that affects the birth-rate, is the practice of family planning. Studies show a marked discrepancy in the desire for family planning and the ability to practise it successfully. This is particularly true of methods requiring repeated initiative rhythm, and the use of condoms, vaginal tablets, and pills. For example, the Harvard Punjab demonstration found 80 per cent of the couples interested in family planning but after two-and-a-half years of intensive programme effort only 17 per cent. were able to practise family planning successfully with traditional methods.

1.4 Programme need for effective personal contact

1.4.1 Importance of person-to-person education for family planning

In most newly developing areas the principal channel for information leading to behavioural change is from person to person. Not only is the extent of coverage with the mass media likely to be limited but the impact is further limited by illiteracy and certain cultural characteristics. In Hong Kong, for example, of 23 000 family planning acceptors, 48 per cent. came to clinics through field workers and another 37 per cent. through satisfied cases. Publicity materials were responsible for only 8 per cent., even in this highly urbanized area. In rural areas the impact of mass media would be expected to be even less. A survey in Haryana State of India found that paramedical staff played an overwhelming role in education and motivation of rural women using the loop 79 per cent. of respondents heard about the loop from health workers. The effect of efforts with posters, films, newspaper articles and pamphlets was almost negligible, with only 4 per cent. reporting even awareness of these media.

The recognition of this need for person-to-person communication is a principal reason for growing efforts to extend family planning informants as widely as possible. This priority has important implications for health personnel in most areas, and health programmes have particularly good opportunities for fulfilling this role, as described in the following sections.

1.4.2 The need for permanent community input

Another consideration fundamental for family planning (as well as other health programmes) is the need for continuity in family and community work Although a certain amount may be accomplished by mobile workers or by specialists who have only a single contact with a mother for a specific purpose, a great deal more can be accomplished by workers who are in continuous contact with the family for its general requirements. The acceptance and successful practice of family planning often requires the reinforcement of repeated contacts Even where specialized clinical services are provided on a mobile basis, their success is much greater where permanent community contacts are in place to find, to educate, and to gather cases for services, and to follow up. Perhaps an even more important requirement for a continuous community input is to secure the collaboration of village opinion leaders. For programme success, a worker-in-residence is essential

2 Resources

2 1 Funding

Financial support commensurate with programme needs is essential for the success of a family planning programme. Budgeting should project expenditures over a two to five-year period, thus allowing the administrator to project his plan. It is also essential to delegate responsibility and accountability The allocation of resources to provinces, districts or smaller political units varies from country to country and formulas for this are worked out among central state and local jurisdictions The important feature is for the local administrator to anticipate his financial needs and budget accordingly with financial responsibility delegated in such a way that he can act within the policy and purview of the programme. Checks and balances for fiscal responsibility may be achieved if everyone is aware of the need for family planning The principle of requiring people to pay something for family planning services should not act as a barrier to the success of the programme.

The costs of family planning efforts in developing countries have varied from US$ 0 05 to US$ 0.20 per capita total population. A developed programme requires at least the latter figure, and more, but how much more must be established.

The table below shows the current status of family planning funding. Doubtless increased costs per prevention can be anticipated as the more easily reached couples are "skimmed" from the target population. However, investments cannot be unlimited, and increased costs with reduced results will certainly signal for increasingly critical attention.

2.2 Manpower

2.2 1 It is apparent that the health services in place offer the most readily available base for introducing family planning services. However, at the same time one frequent objection to a health service-based approach to family planning is that it will take too long to develop adequate MCH services to meet the urgency of the population problem. If we require traditionally-trained personnel and "fully developed" services, this objection is valid and applies to any priority MCH problem. The newer trend is for health programmes to extend as far as possible the minimum requirements for attaining priority objectives They should not represent a rigid pattern of training and facilities.

Manpower development is especially important to cover the personal education extension approach that has been required for family planning programmes in many areas. In the widest sense, even a temporary trainee, with skills adequate to fulfil only a single function such as family planning or applied nutrition, could be classified as an MCH worker as long as the worker is related to a systematic efficient public health programme of training, supply and supervision. Advantages should be apparent, however, for improving the breadth of this type of worker's skills and functions as rapidly as convenient. In contrast, the auxiliary

ESTIMATED ONE-YEAR EXPENDITURE CURRENTLY 1970

	Dollar equivalent
Countries	
India	48 000 000
Pakistan	23 000 000
Korea	3 000 000
United Arab Republic	3 000 000
Turkey	1 500 000
Columbia	(1 000 000)
Taiwan	900 000
Malaysia	700 000
Others	4 900 000
Total	85 000 000
Agencies	
AID	75 000 000
Population Council (69)	11 300 000
Ford	5 000 000
IPPF (69)	8 400 000
SIDA	11 000 000
United Nations	(15 000 000)
UNICEF-WHO	5 000 000
Other agencies	5 000 000
Agency total	120 000 000
Less overlap and expenditure not related to programmes in less developed countries	40 000 000
	80 000 000
Grand total	165 000 000

nurse-midwife whose "training" has mainly consisted of a period during which she performed menial hospital duties, who lacks village orientation, and who has no supervision is hardly likely to be an effective MCH worker.

In some cases an even bigger obstacle to developing a systematic MCH-FP programme is the conservative orientation of some of the paediatric and obstetric professionals rather than the adequacy of the basic qualifications of peripheral auxiliaries. By and large the auxiliaries are only as good as the administrative organization and in-service training given to them by the professional leaders. Therefore, a primary target is adequate orientation of professionals to be good educators and supervisors.

The question of manpower coverage, then, is not whether we use traditional MCH workers or not, but whether training, motivation, supervision, and village orientation are adequate. Rather than dogmatically following any pattern, the approach must be adapted to meet efficiently the priority problems.

2.2.2 Health manpower

It must be remembered that, irrespective of the political decision as to the administrative placement of the programme, additional personnel must be appointed. An alternative would be to use existing personnel, provided that assigned duties were proportionately decreased according to the anticipated work-load of family planning activities. A doctor or trained midwife doing pre-natal work at an MCH clinic would be overburdened if the responsibility for insertions of IUDs were added to his or her normal routine. A public health nurse would be hard pressed in her daily field assignments to assume an added load of visits to potential family planning participants per se The number of man-hours in a work day can be clearly defined. Only a measurable number of work units, such as clinic treatment or home calls, can be accomplished in a given period of time. Too often new assignments are made casually. When new assignments are given in addition to established work-loads, the additional man-hours involved must also be considered

Both professional and auxiliary staff are required to carry out the programme. These include doctors, nurses, midwives, health visitors, health educators, statisticians, and administrators. Staffing should be related to and congruent with existing civil service systems to expedite the programme. However, salaries and terms of service should be as attractive as those of other programmes and not dependent upon incentives, special pay and specific rewards. Extra benefits might be a temporary expedient but do not lead to long-term institution building or career advancement. When delays in hiring occur, authority should be sought for the director to recruit and hire expeditiously But delays are not a good reason for the establishment of a programme outside government services.

Special emphasis is given to family planning training as a new activity in most countries; After their recruitment, workers are trained at all levels, the type of training varying in accordance with the category of personnel When a great many new staff workers are hired at the same time, short-term, job-oriented, in-service training is expeditious These workers can be brought back to the training centre later for further training of greater depth and breadth.

In addition to gaining experience in family planning, it is well for doctors to familiarize themselves with the administrative and educational aspects of the programme. Other workers should receive instruction appropriate to their level in the medical aspects of family planning activities. Central training at national institutes or foreign universities for post-graduate work should be restricted to programme officials Normally, supervisors are trained at the national level and field workers at the local level.

It is becoming more important to include instruction in family planning in the regular curricula of medical, public health and nursing schools. Over-all acceptance of the principles involved by all personnel connected with the programme is necessary for the full appreciation of family planning as part of a way of life.

In order to ascertain acceptance and the results of training, an assessment of individual performance should be made. This focuses on the content of training courses the need for further training or expansion of current concepts.

2.2.3 The traditional village midwife

As mentioned, many deliveries are still attended by traditional midwives (called Dais in India and Pakistan) Providing basic training for these indigenous midwives has been a long-standing MCH programme. This work is often not easy and bad performance by the midwives often persists. Nevertheless, a key factor in the success of programmes is the degree to which a programme relationship is promoted with influential local people such as these midwives. This is particularly true for family planning. The traditional midwives are in closest contact with the mothers Where they are not mobilized for the programme they tend to become competitively antagonistic and obstructive to the programme.

In Pakistan some 35 000 village organizers (mostly village Dais) have been recruited for the programme. These unskilled but village-knowledgeable workers are responsible for the bulk of the subsidized sales of non-clinical contraceptives, and, according to the monthly clinical record analyses of the National Research Institute of Family Planning, are responsible for 80 per cent. of the clinical family planning referrals.

The importance of indigenous workers has also been shown in India by demonstration work in Gandhigram, Chembur and the Planning Research Action Institute.

2.2.4 Other family planning motivators

The preceding discussion of health generalists for family planning should not imply that other workers do not have a role to play. In fact, some comparisons have shown that single-purpose family planning workers out-perform general health workers on family planning referrals. This may be due to more intensive family planning training, more direct incentives, and the fact that they are devoting fuller attention to family planning. The satisfied user who received a fee for each referral has been found to be an effective case-finder in India. Special "pre-pregnancy" workers have been effective in Taiwan. Matriculates trained for family planning work have proved suitable for field education activities in East Pakistan.

The supplemental use of single-purpose workers also has the advantage of sparing more highly trained health workers for other tasks. Workers with and without general health background have a role to play, and close co-ordination is desirable.

2.3 Non-clinical coverage

A first stage programme need is to provide at least the minimum convenient requirements for contraception in all areas and to all people who might be receptive. These can be initially those that do not require delivery by professional or subprofessional personnel nor clinical facilities, and include condoms and vaginal chemicals Unfortunately, in some of the oldest family planning programmes this minimum requirement has not yet been fulfilled and in others non-clinical distribution has not even been undertaken. Anticipated poor acceptance and non-use are sometimes cited. These excuses are hardly valid reasons for not pursuing this approach at least to the limits of its acceptability To the extent that contraceptives are accepted, the programme is successful. Even a low degree of acceptance in the predominantly rural countries would contribute more to the programme success than a higher degree of acceptance of more effective methods that depend on clinical facilities which are within reach of only a small urban proportion of the population. In order to provide these at an acceptable price, steps are necessary to remove import licences and taxes, or, better still, to purchase or manufacture and distribute at subsidized prices. An adequate profit incentive for the retailer is desirable to stimulate the programme and a small cost to the purchaser and retailer to facilitate control of wastage. Alliance with large commerical marketing enterprises may have some advantages since these enterprises have the experience and the outlets, and can avoid many of the bureaucratic problems of distribution through official agencies. Such a scheme has been initiated in India during the past year. In Pakistan, subsidized sales through female village organizers (usually untrained midwives) and shopkeepers have reached a level of 15 000 000 monthly, enough to provide more contraception than the entire clinical programme with IUD insertions and sterilizations. However, the reliability of the approach needs to be cross-checked and, hopefully, will be documented by the current National Impact Survey being undertaken there.

In addition to moderate acceptability and reliability, a deficiency of non-clinical methods (also oral contraception) is that they require repeated preventive initiative whereas the IUD and the surgical methods require only a single decision.

Although we have limited information in many areas, and there is much variation in settings, only a small proportion of the population is effectively within reach of clinics. Some inquiries in India show that 75 per cent. of clinic attendance comes from within a radius of three kilometres. Rural clinics, including some 5000 primary health centres and perhaps an equal number of other clinics accessible to rural residents, would then gather 75 per cent. of their attendance from an area of 300 000 square kilometres, which represents only about a tenth of India's total area. The coverage in some other areas of South Asia is even less.

2.4 Supply

Sufficient experience is at hand to demonstrate that supply channels ensuring an even flow of materials must be established if the programme is to be successful. For every IUD used, one must be manufactured, one en route to the central supply depot, one en route to the station, one on the shelf at the clinic and one in the antiseptic solution. In other words, there must be at least six additional IUDs available to back up the one used. The same chain of events can be stated for oral contraceptives, condoms, foam tablets and jellies. Adequate time must be planned for the delivery of audio-visual and other motivational material, as well as clinical supplies

2.5 Collaboration

The co-operation of agencies outside the government can be of great assistance, especially in training personnel and experimenting with new techniques and approaches. However, it is important to be on guard against over-dependence on non-governmental agencies for the actual operation of programmes. The view that voluntary agencies can pay more, circumvent merit systems and attract career workers is myopic since, usually, financing by these agencies is of short duration and dependent upon voluntary contribution or grants from charitable foundations, given only for purposes of demonstration.

Much more fruitful is co-operation with other government departments. Certain agencies can help the family planning organization by printing health education material and arranging for the use of radio, television and other public information facilites. Social support can be obtained from community developers, agricultural extension agents and teachers. Aid in programme fulfilment can be sought from the military, the labour ministry, and the department of education.

At an Asian meeting on the "Administrative Aspects of Family Planning" (Asian Population Studies, No. 1, ECAFE United Nations Publication, New York, 1966) the following contributions from various governmental agencies were identified

(a) Contraceptive supplies (commerce)

(b) Public information (communications, information, publications)

(c) Social support for small family norm (community development, education, local government)

(d) Approach to special groups (labour, social insurance)

(e) Evaluation (census, social research)

(f) Training (professional education institutions)

(g) Research (research facilities).

3. Administration

3.1 Planning and evaluation

Planning involves over-all detailed consideration of problems, methods for solving these problems, and resources for applying the methods. It then involves decisions, based on this consideration, of the most effective mobilization of limited resources, distribution and application to have maximal effect on the problems. It is now widely recognized that planning is not only an initial, but an ongoing administrative requirement. Ongoing planning is closely linked with the requirements for ongoing programme evaluation.

It must be stressed also that planning is not an end in itself, but a means towards an objective. Efforts must be made to see that plans are implemented.

Where separate authorities are responsible for planning and for administration, precautions must be taken to see that administrative authority is not hindered by the over-persistence of planning authority control.

3.2 Central administrative functions

As each country has a different system of administration, it would not be possible to draw a system of administration for FP that could work out in every country, e.g. "The distribution of authority and responsibility for national, intermediate and local public health administrative units varies from country to country. In some, all of the functions are assumed at national level for the country as a whole, in others, major responsibility for some functions is assumed".

An important aspect of the programme is the establishment of the administrative unit at the national level It is most gratifying to note that a large number of developing countries have followed the policy of establishing administrative units for FP along with other MCH functions in health departments. Much remains to be done, however, to place these units under the direction of well-qualified and experienced workers, to establish corresponding units at intermediate levels, to proceed in the effective supervision of activities at local levels, and to analyse critically the results obtained.

As FP programmes involve different ministries such as education, health and agriculture, as well as voluntary organizations, FP units at the national level should be in a position to establish an advisory committee with full representation of the ministries concerned in order to ensure co-operation and co-ordination of activities. The assistance and technical guidance of medical teaching institutions, university departments of child health and paediatrics, obstetrics, social and preventive medicine, and schools of nursing are most important factors in achieving favourable results. The benefit FP and other services derive from working relations with such institutions is large. Furthermore, the advantage is mutual since clinical, training and research staff, by having close relationships with operating services, are improved by becoming involved with problems of the community.

Some of the functions of the central administrative unit are as follows

(1) Serves as the integrated unit at national level for planning, administration, and formulation of policies.

(2) Studies needs, evaluates existing programmes for upgrading or improvement of services or centres.

(3) Establishes standards, gives operational instructions.

(4) Establishes a network of services through the country.

(5) Makes mass surveys or large-scale campaigns.

(6) Collects data and statistics for tabulation, analysis, evaluation, and use for programme planning purposes.

(7) Co-ordinates with other units in Ministry of Health (such as nutrition, dental health, mental health, health education, communicable disease, etc.).

(8) Co-ordinates with other ministries relevant, e.g. education, welfare, community development

(9) Collaborates with leading professional groups, community leaders.

(10 Co-operates and provides guidance to the school/health programme if this activity is under the Ministry of Education.

(11) Stimulates, co-ordinates and conducts research and evaluation.

(12) Is responsible for training and manpower development.

(13) Collaborates with teaching institutions (medical school departments of paediatrics and obstetrics, schools of public health, teacher training colleges, nursing and midwifery schools), in service, research and teaching functions

(14) Establishes uniform service record forms.

(15) Establishes performance norms

(16) Advises on and participates in preparation of mass educational media or mass health education procedures.

(17) Stimulates experimentation with new methods and patterns of delivery of family planning education and services

(18) Drafts proposed legislation.

(19) Participates in preparation of budgets and receives funds from government and other sources.

(20) Gives advisory services and technical assistance to programmes such as health education, nutrition, etc.

(21) Gives grants-in-aid to voluntary organizations or financial aid to voluntary organizations or intermediate or local units for new approved projects.

(22) Co-operates and provides assistance to private or voluntary organizations.

3.3 Delivery of family planning services to cover the population

To deliver services effectively at the peripheral level, planning on a larger geographic basis is essential.

At the peripheral level the team needs to have demographic data such as the population to be served (by age-groups), births, deaths, morbidity, etc

One of the serious problems of the delivery of services is that of imcomplete coverage of the population requiring care. Among the various reasons accounting for this incomplete coverage are lack of funds, lack of sufficient trained personnel, geographic problems such as unwillingness of professional personnel to work in the more remote rural areas, and inaccessibility of certain populations, lack of acceptance of the health needs of mothers and children as deserving sufficiently high priority for increased support.

Auxiliary workers, while useful at all levels, are essential for assignment to the more remote rural areas, their training on the job and supervision are essential. The trend is for the basic health centre to provide basic family planning services, with each health centre having its own subcentres for which it is responsible The quality and efficiency of services need to be taken into consideration, as well as quantity, in planning for coverage of the population. There is need for a system of a network of services.

Means of providing as wide a coverage as possible must include transport services. The provision of proper equipment, supplies, and drugs is an essential part of coverage.

The services must be planned and adapted to meet the needs of the people. Where available services are not fully utilized, inquiry must be made to ascertain the reasons. Are the services not provided when the people are free to come? Are the services inappropriate to the needs? Are the people newcomers or so isolated as to be unfamiliar with the use of services?

In order to make these activities effective, the following has to be assured

(1) That there exists an easy system of referral to the next higher health unit.

(2) That there is supervision which includes constant in-service training, guidance and encouragement

(3) That the responsibilities of the workers have to be clearly defined and controlled, and their geographical area specified.

(4) That, wherever applicable, personnel work in a team.

(5) That community participation is gained for the services offered.

(6) That facilities and equipment are available to perform these activities.

3.4 Transport and mobility

Special mention should be made of the use of vehicles since transport is universally in short supply Assistance should be sought by substituting bicycles, scooters and motorized rickshaws for four-wheeled jeeps or sedans. Preventive maintenance and motor pool control will alleviate many of the problems that arise in connexion with the purhcase of petrol and oil and the arrangements for repairs. Pooling resources may insure the good maintenance of vehicles and the use of a reserve force.

Mobile services are usually considered to supplement the lack of access to fixed clinical facilities. These have been employed both for vasectomy (to a limited extent also for tubectomy) and for loop insertion. They have been relatively successful for vasectomy in India since little individual follow-up is required and unfavourable reactions in the community have not usually been apparent. Mobile clinics for IUD insertion have been less successful, since more individual follow-up is required and, more important, a continuing community input is required to prevent adverse rumours and panic over the minor physical side effects (bleeding and some discomfort). Where widely decentralized clinical facilities have been provided, achievement has been much greater. This has been accomplished in some areas

by training auxiliary personnel to put in IUDs. IUD insertion by adequately trained midwives and auxiliaries has compared favourably with insertions by physicians in Barbados, India, Korea and Pakistan

The mobile approach can be improved by observing a regular schedule of frequent visits. For example, in Tunisia, after observing some of the above described problems with irregular mobile services for IUD insertions, the Minister of Health directed that all mobile visits would be repeated weekly or at least fortnightly and would appear regularly at a planned time A second partial solution to the problems of mobility is to co-ordinate with permanent community contacts who can gather cases and answer questions between visits.

Other problems with the mobile approach include lack of roads, problems with vehicle maintenance, inconvenience and travel time demands on staff, climatic problems, and high cost. In general, transport of professionals can be better applied for the supervision and in-service training of local workers, rather than for providing mobile services.

3.5 Reasons for integrating family planning with other MCH concerns

The health reasons for providing family planning have been described in a previous section. These reasons often provide a starting point for introducing the topic to parents. Although studies generally show that economic reasons and "convenience" overshadow specific health reasons as a motivation for family planning, a broad definition of health, encompassing social well-being, includes all of these motivations as health related. The rapport health workers establish with families is an advantage in discussing this subject. The time and situation when the patient is in contact with health workers provide further opportunities. For example, in Hong Kong a comparative study showed that contacts by workers in maternity homes and hospitals were twice as productive as home visits by social workers.

Maternity care obviously provides many opportunities and needs for family planning. Counselling is not necessarily given only in separate maternity care programmes but, as with other aspects of maternal health, should be closely related to child health care. The health worker can conveniently introduce the subject when dealing with family nutrition questions for example. The management of many chronic diseases, such as tuberculosis, calls for family planning. Family planning services should also be available in conjunction with the newly developing field of genetic counselling.

The use of the intrauterine device, hormonal contraception and surgical fertility control requires health coverage for proper case selection, implementation, follow-up and management of side effects.

Berelson points out in his guide for developing national family planning programmes that, where health programmes are not adequately integrated with family planning programmes, there is likely to be friction and opposition The support of the medical community is highly desirable and its participation for servicing the programme indispensable. At the outset, it is desirable to secure the most prestigious medical support possible for family planning efforts. The medical profession will be involved in selecting contraceptive methods to be used. Unless medical and health workers are mobilized and supportive to family planning efforts, public support will be deficient. This is true of all levels, from the academic professor of obstetrics to the village midwife.

Health disciplines which contribute directly to family planning programmes, other than medicine and nursing, include health education and health statistics.

The professional skills of the public health educator are closely applicable to the problem of education for fertility management and include improving and supporting the person-to-person education mentioned above, guidance of mass media efforts, the development of sex educational aspects of school health and adult education programmes, strengthening marital counselling, and influencing community leaders and other potential collaborators.

The structure established by health programmes to collect data on births, deaths, diseases, health personnel performance, and facilities, serves as a channel for information on family planning programmes Certain supplementary activities are desirable to evaluate fertility problems, and family planning programme efforts. For this, health programmes are giving increasing recognition to disciplines such as demography and the social sciences. Epidemiology, usually thought of in the context of communicable diseases, is a science of statistical study of influences affecting populations, and can have a closer relation to demography and the study of fertility problems.

There are many logistical reasons for integrating programmes for dealing with the priority needs of mothers and children, including family planning. Funding can be pooled, a stronger infrastructure developed, supervision can be strengthened, duplication of facilities can be avoided, and workers can introduce the subject of family planning in relation to many of the reasons for the mothers' visit to the clinic. Isolated family planning facilities are likely not to be fully used and workers are often not fully employed, particularly in the rural areas that it is so crucial to cover. In the many areas of the world where mothers can be approached only by female workers, these logistic questions are especially acute, because of the shortages of such workers.

Where funds and personnel are diverted into isolated family planning programmes there is not only the danger that health services will be weakened but also the likelihood that basic infrastructure, which is important for family planning objectives, will be weakened. Where the administration of family planning is carefully balanced with other health services, these programmes should be developed in a way that they will be mutually supportive.

Family planning within the context of a health programme that is oriented towards immediate felt needs is likely to be more understandable to the public than family planning presented as a population control programme with economic justifications. The latter may be comprehensible to the economist, the demographer and the national planner, but it may not be understood by the family, which, from the acceptance viewpoint, is more important.

3.6 The maternity-centred approach to family planning

The general objective is to promote an approach in which family planning and other maternal and child health activities will be mutually supportive to an optimal degree. Priority is given to reaching women at the time of delivery to provide them with family planning advice and services. This post-partum approach has many advantages.

(1) Women are reached at a time when they are conveniently identified as fertile, when they are likely to be particularly receptive to spacing or avoiding further pregnancy and when contraception can be applied before the risk of subsequent pregnancy.

(2) This approach is based on delivery, which is the most widely practised single MCH service. Most women are delivered by persons who can potentially participate in a family planning programme.

(3) This approach might also be suitable for reaching and providing contraceptive services to women following abortion or early foetal death.

Up to now, experience with the post-partum approach has been principally in large urban maternity hospitals It is feasible, however, to provide broader coverage through its access to more extensive maternity services, including those providing home delivery and perhaps even through traditional birth assistants.

From the logistical viewpoint this approach can focus attention on those women who are potential new or continuing candidates for family planning rather than requiring random attention to the whole population. (This does not deny the importance of other approaches,

however.) The number of such women who deliver in a given year is approximately 4 per cent. of the total population of a developing country, or 24 per cent of the adult fertile couples. Those who annually pass the general parity level at which women become receptive to family limitation are less than 1 per cent of the total population, (in addition to these, however, attention must be given to women of lower parity who desire spacing and to the backlog of those with higher parity who have not yet achieved family limitation, or require continuing attention).

To achieve this objective, steps are to be taken to help those providing maternity care to provide family planning, to extend systems of improved maternity care to cover more of the population and to mobilize and supervise even those untrained persons who have been providing maternity care, to contribute to family planning and improve maternity care. The continuity of maternity care which is often necessary for successful family planning is also to be promoted along with child care and other family care which provides opportunities and, in fact, rationale for continuing family planning. In the many areas where it is most practical for all family care to be given by a single person, in order to cover the population as widely as possible emphasis is placed on co-ordinated maternal and child care including family planning.

Although the post-partum approach is given priority in this approach there would be great advantage in extending the family planning aspects of MCH services throughout the maternity cycle, taking advantage of all effective contacts with the family. The reasons for wishing to extend family planning activities beyond the post-partum contact are

(1) Some contraceptive approaches have limited applicability in the immediate post-partum period

(a) post-partum sterilization has limited or no acceptability in many areas,

(b) IUD insertion, although it can be done conveniently at this time, is likely to cover a period of post-partum infertility which may largely coincide with the period the IUD remains in place,

(c) the estrogenic component of hormonal contraception is likely to suppress lactation, being responsible, therefore, for a serious complication in areas where infants are primarily dependent on breast feeding

(2) Successful contraceptive motivation and practice often require repeated and reinforcing contacts with reassurance about side effects, repeated encouragement, and appropriate care.

(3) The current application of the post-partum approach being primarily urban, the bulk of the population which resides in rural areas is not reached.

3.7 Programme needs for improved methods and for employing more than one method

Many of the present limitations are due to factors other than deficiencies in existing contraceptive methods. Many countries have succeeded in lowering their birth-rates, even without the use of modern methods, largely through abortion, coitus interruptus and post-ponement of marriage. Nevertheless, it can be seen from the foregoing discussion that all of the presently available methods have certain disadvantages. Therefore, the availability of improved and supplementary contraceptive methods would improve achievement to a certain extent. Research in this direction should be a high international priority. Some improvements might be a convenient and well tolerated injectable, since injections enjoy wide popularity and can be administered conveniently on a mass basis, a removable implantation that would allow convenient reversal of fertility suppression, the improvement of present sterilization methods to make them conveniently reversible, a safe, convenient hormonal or chemical agent of male contraception, a post-coital oral agent, or a safe chemical agent for

legal abortions Experimentation is proceeding in all of these directions with strong likelihood of improved methods in the future.

It should also be apparent from the preceding presentation that no one method would be ideal for every circumstance, and that it is desirable to provide all of the available methods, since each has a role to play. The provision of alternative methods increases the desirable voluntary aspects of family planning programmes by allowing families a wider choice. Coercion to employ any particular method is undesirable not only as a matter of principle, but because it is apparent that narrow-minded approaches to improve the performance with any particular method by limiting the availability of other methods will eventually prove self-defeating.

4. Legislative constraints and supports

4 1 Hurdles to consider

(1) Religious
(2) Political
(3) Shortage of resources
(4) Prestige of "power" from a large population
(5) Internal group competition Minorities
(6) Economic
(7) Status of women
(8) High mortality
(9) Desire for fertility. Sons
(10) Desire for security
(11) Ignorance

4.2 Varying policies for family planning

(1) Population
(2) Human right
(3) Health

4.3 Gaining support and authority

Programme support is an initial and continuing requirement. The degree to which family planning programmes have gained support in many countries and at an international level in recent years has been remarkable. This has been brought about by the influence of enlightened leaders, demographers, economists, national planners, and health workers. Deficiencies remain at every level, however, and the continuing provision of information on fertility problems, programme needs, and progress is an essential requirement.

Surveys of public attitude towards family planning and of problems brought about by excessive fertility have helped to influence leaders. In many areas standard family planning knowledge, attitude and practice surveys have provided an initial basis for gaining programme support. In other areas, surveys of the induced abortion problems have influenced public authorities.

Another mechanism for gaining adequate programme support has been the establishment of programme authority high enough in the government to have broad and effective influence. This has been accomplished by allowing family planning authorities access to the programmes of all agencies, or by providing an inter-agency board or supreme council. Caution must be taken, however, to see that inter-agency councils do not interfere with the effective authority of operational agencies. Separation of authority and operational responsibility is a basic administrative pitfall

Support of leaders has been gained in several areas by distributing a clear synopsis of the problem.[1]

Voluntary and semi-autonomous agencies have in many areas played an important role in mobilizing public support. Their flexibility, latitude and lack of political restrictions facilitate pioneering in this area. They may be the best authority for programme initiation where governmental encumbrances hinder programme implementation through official channels However, their goal should always be to mobilize official resources as rapidly as possible, rather than compete, duplicate or undercut these.

Involvement of community leaders at the local level and mobilization of public support is also an important requirement To do this, permanent generalized community contacts have many advantages over temporary specialized inputs

5 Capacity of services

5 1 The capacity of the operational unit

Obviously, the capacity of a unit would depend on whether it were on a full-time or part-time basis In actual practice a part-time person or facility may perform more family planning than a full-time person Most workers do not want to work full-time on family planning. Many families prefer to receive family planning in general facilities. In fact, there are far more important factors influencing the number of couples a worker will handle than his actual work capacity. Cultural factors such as preference for female workers and topographical factors (including transportation resources) will be important. In fact, the actual time required to do a procedure is a negligible consideration The principal considerations are placing facilities and personnel within the range of the population, on a continuous basis, educating and motivating the workers, and educating and motivating the public.

The minimum requirement of at least one permanent educational and organizational contact in each village will be the most extensive requirement

For the IUD and hormone contraception, the coverage must be almost as broad, since these procedures require continuous education and follow-up A professionally qualified person may be used on a mobile basis to insert loops and to supervise those workers distributing contraceptives if the local worker is developed to provide the continuing registration of pregnancy, case-finding, education, organizational contact, and follow-up.

For surgical procedures follow-up requirements are negligible and these can be better provided in larger, more centralized facilities, or even through mobile contact with peripheral clinics

5.2 Capacity of programmes - what can be expected

Table 1 shows a rough tabulation of the totals of contraceptive methods in various national family planning programmes. Obviously, the contraceptive effect of the various methods cannot be totalled as such Various studies would indicate that only about half of the IUDs inserted are still in place, although this varies between programmes and must be related to the duration since insertion. A rough estimate is that the average IUD insertion provides about two years of contraception and on the average reduces the numbers of eventual births per woman inserted by 0.5 or 0.7, although this estimate is subject to several other qualifications The eventual number of births prevented by reported sterilization is much higher but is also subject to several qualifications The eventual number of births prevented by sterilization is estimated to be 1 5 per procedure in the Indian family planning

[1] For example "Danger Signal India's population crosses the 500 million mark", Central Family Planning Department, Government of India, 1967

TABLE 1

Contraceptive methods reported for national family planning programmes[1]

	Estimated population 1968	IUD insertions	Pill		Sterilizations	Conventional current users	Reported through
			Acceptors	Current users			
Pakistan	126 000 000	2 453 000		300	770 373	1 500 000[2]	6/69
Korea	30 470 000	1 608 000		136 000	138 000	133 000[3]	1/70
China (Taiwan)	13 466 000	636 000	95 000				12/69
Singapore	1 988 000	4 300	38 000		2 800	33 000	12/67
India	530 000 000	3 174 000	17 000	11 000	6 536 000	1 000 000[1,2]	9/69
Tunisia	4 700 000	50 000		3 700	4 700	2 000	4/69
Jamaica	1 913 000	8 500	25 500				12/68
Mauritius	800 000	2 500	8 000			1 500	12/68
UAR	33 000 000	126 000		300 000			2/70
Malaysia (West)	8 800 000	1 897	88 440		3 236	2 088	12/68
Turkey	33 500 000	151 000	"about same"				end 68
Thailand	33 693 000	130 000	22 000		49 000		2/69
Morocco	14 580 000	22 530	starting			starting	3/69
Hong Kong	3 927 000	72 000	25 000		1 000		1968
Ceylon	11 950 000	69 000	54 000		18 000	19 000	12/69

[1] Includes contraception by official and voluntary organizations but not through private and commercial channels unless sponsored by these organizations. Statistics assembled from reports on the various national programmes or provided through the Population Council

[2] Calculated on basis of ten use sales per month per user

[3] Condoms only

programme The long-term fertility impact of sterilization is estimated to be on the average three times greater than the impact of IUD insertion and it is clear that sterilizations and IUD insertions should not be added together as equivalent procedures without adjustment.

By 1969 it is apparent that the older programmes in Asia and North Africa have reached a plateau in the number of procedures performed per year, although the cumulative proportion of couples contracepted continues to edge upwards. Taiwan and Korea have shown a similar level of accomplishment yearly for several years. India, after a steady yearly increase in the quantity of procedures over the past 15 years, showed in 1968 a levelling out for the first time Pakistan's performance reached a peak in November 1968 and has since dropped.

This levelling out represents both a saturation effect and the need for further programme development In general, the most accessible couples from a large backlog of potential acceptors have been reached. From the previous description of population fertility characteristics, it is apparent that the number of new fertile couples appearing in the population sets limits that will prevent progressive increase in the rate of new acceptors. A progressive proportion of couples adopting family planning can be expected, however. Some simple analysis will show that the proportion of fertile women, or even those with three or more children, covered by these programmes is still small Furthermore, in those countries that have reliable birth statistics, the reduction in the birth-rate during this period can be only partly explained by the procedures done. Changes in practice outside the programme (including in some areas increasing numbers of abortions), changes in marital status, and other general factors have also played a role.

6 Evaluation

6.1 Base-line and benchmark assessments

Base-line and benchmark assessments of fertility, and knowledge, attitude and practice of contraceptive methods are basic in programme guidance

In any evaluation, the results of specific inputs should be measured. To assess programme accomplishment, certain tools are necessary. They should be of a diagnostic nature in order to enhance or complement the programme. If programme procedures are sufficiently elastic, weaknesses can quickly be eliminated and strengths reinforced. Ultimately, the measure of success in attaining goals will be reflected in a declining birth-rate.

Ongoing analyses are to be found in monthly compilations of work accomplished, personnel in place and supplies used. A breakdown is given showing the population served according to age, location and method. Reports and analyses should flow back to the originating office. Longitudinal studies are found in studies of family planning knowledge, attitudes and practice, surveys and random samples

There is a growing body of knowledge accumulating that will influence future programmes substantially Exchange of programme experience and the dissemination of information are important to the programme director Up-to-date information must reach workers at all levels.

6.2 Goals and targets

The goal of the programmes, whether they are operated within or outside the health ministry, is usually stated as an attempt to reduce the natural increase in population for the total well-being of people, including, of course, their health. To accomplish this, a budget with provisions for additional personnel, supplies of material and clinics are included in the plan. Targets for accomplishment are established, and the need to train workers is recognized. A time-table is established and the necessary forces mobilized.

The goals are stated in various ways as targets, for example, the number of IUDs inserted, sterilizations performed, "couple years" of protection, and eventual birth preventions. These targets can apply to a country or smaller political sub-division, for a month or a year. This approach can also be used as an administrative tool in analysing programme progress. Other components of target-setting are found in numbers of persons hired, trained and placed. Also used are quantities of material supplied, numbers of clinics operating and necessary vehicles provided. Adjustments are made to particular physical and regional charactertistics. Urban and rural population distribution, literacy and several economic factors can influence the target. Accomplishment is dependent upon cultural, ethnic, personal, political and economic factors.

Most family planning programmes establish targets for performance and/or reduction in birth-rates or national growth rates. These targets provide a basis for guiding (or sometimes misguiding) work efforts. They are largely arbitrary, with only superficial relations to estimates of programme potential or fertility control needs. From the standpoint of comparing programmes it is useless to compare achievement with targets because the comparision can suffer either from lack of achievement or lack of reality of the targets. Programme achievement can better be examined in relation to basic population dimensions.

The failure of family planning programmes to achieve targets does not constitiue a justification for not supporting present efforts in so far as they can be successful. Nor does this failure in itself justify opinions that alternative approaches such as vaguely proposed "social engineering", more focus on single-purpose programmes, or, alternatively, more focus on comprehensive health services, would be justified. The only proof comes from testing and observing.

6.3 Pilot demonstrations

In an expanding programme one basis for answering questions about cost-effectiveness is to establish additional inputs on a pilot basis. Many programmes do have pilot and demonstration areas. It is wise to allow these pilot areas to go well beyond the practical scope of immediate programming in order to provide answers to eventual programme development.

It is very difficult to develop controlled cost benefit experiments under the difficult conditions of developing countries, and usually pilot areas provide at best empirical experiment for programme guidance. Furthermore, programme development often cannot wait for detailed testing and assessment. Consequently, much programme investment must depend on critical evaluation of onging programme experience, and often this provides an even better basis for programme development from the artificial conditions of a pilot programme.

Another important point to stress is that the experience gained in pilot areas should receive administrative attention. Pilot efforts have had an unfortunate tendency in many areas to remain self-contained, rather than means to broader ends.

A limitation of the potential for pilot family planning programmes is that short-term results may not reflect long-term impact. For many approaches long and broad observations are necessary to fully assess the impact of inputs.

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