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HEALTH ASPECTS OF FAMILY PLANNING

by

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Introduction

This symposium provides a comprehensive and critical analysis of the current status and prospectives of a range of methods of fertility regulation. Family planning refers to the use of these methods to help individuals or couples attain certain objectives: avoid unwanted births, bring about wanted births; produce a change in the number of children born; regulate the intervals between pregnancies; and control the time at which births occur in relation to the ages of parents. Family planning may include an array of activities ranging from birth planning and the management of infertility to sex education, marital counselling, and even genetic counselling.

Regulation of reproduction and child bearing by family planning will have a profound influence on virtually all aspects of life for the individual, the family, and the community. Briefly, family planning is linked to health in the following ways: first, changes in the time or occurrence of pregnancies have direct effects on mortality and morbidity, and on health as a "state of complete physical, mental, and social well being and not merely the absence of disease or infirmity";

second, methods of fertility regulation may have direct effects on health;

third, provision of services for family planning care concerns medicine and public health, since many of the tasks required in the initiation and continuation of family planning practice are usefully or necessarily integrated into the system of health care;

lastly, the general level of health, and the health service's contribution to that level in any community or country, contribute substantially to the social, cultural and economic setting in which individual and group action for family planning develop.

The effects of family planning on health status

Reproduction has a broad impact on the effective functioning or health of human beings, physically, mentally, and socially. By the very nature of reproductive processes, the effects involve, at least, the mother and child, and usually other members of the family unit as well, the father and previous children. The effects on health may be lifelong and may carry over from generation to generation. Studies have shown that events occurring during pregnancy may influence the growth and development of the foetus and subsequently of the child (Wld Hlth Org. techn. Rep. Ser. 435 1969).

Clinical contraindications to pregnancy

There are, of course, clinical contraindications to pregnancy. Prescription for birth control is indicated in conditions such as severe hypertension, recurrent toxaemia of pregnancy, haemolytic disease, as well as previous serious obstetric injury, marked anaemia and malnutrition, and recurrent abortion. In all these instances the practice of family planning will help prevent existing disease from being aggravated. The threat to life or health of the mother is immediate and direct, and the likelihood of a dead or defective child being born is high. Other conditions such as cardiovascular disease, diabetes, epilepsy, and mental disease, represent relative contraindications to pregnancy, especially in situations where health care is inadequate.

Disease prevention: the epidemiology of unregulated reproduction

The need for birth planning for disease prevention has also been shown in other situations. Initially, pathology is not overt, but the statistical probability of impaired functioning from unmodified childbearing is high.

During the past few years an increasing number of studies have focused on the interrelationships between the number of pregnancies, family size, inter-pregnancy spacing, and parental age, and factors relating to pregnancy outcome, maternal health, child health, and even family health. An overall picture, by now quite

familiar, emerges from these studies, linking large family size, high parity, excessive maternal youth and short inter-pregnancy intervals with varying degrees of morbidity and mortality for mother, child, and family. Conversely, pregnancies between the ages of 20 and 30, spacing of two or more years, and family size from one to three or four, appear to favour maternal efficiency, better child development and well being.

Most of these studies, it is true, have been carried out in Europe and in North America, and their results cannot be extrapolated as such to other settings. But clinical impression suggests that certain of the detrimental associations can be expected to be even more striking in a developing country. Indeed, a small number of studies from such settings indicate that the correlations are applicable there also (Baird 1965, Beasley J.D. 1968, Day 1967; IPPF 1968; Israel 1968; Jaffe & Polgar 1967; Kessler 1967; Perkin 1968; Perkin 1969; Siegel E 1968; Wray 1970; Wld Hlth Org. techn. Rep. Ser. 442 1970)*

For example, while maternal mortality risk is slightly less with the second and third pregnancies than with the first, it rises with each pregnancy beyond the third and increases significantly with each pregnancy beyond the fifth. It is at times impossible to dissociate the effects of parity from those of the mother's age, but usually the two factors are interlinked. A study in India, in an area with a maternal mortality rate of 10 per 1000 live births and where the average number of pregnancies is more than 8, shows that the mother has about 1 chance in 10 of dying in childbirth eventually.

A number of complications of pregnancy and delivery have been shown to have a statistical association with high parity: placenta praevia, accidental haemorrhage, prolapsed cord, abnormal presentation or position of the foetus, rupture of the uterus, and postpartum uterine inertia with severe bleeding. higher-than-average incidence of complications is also associated with primigravidity:

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* These references are papers and monographs which provide comprehensive reviews and documentation for the conclusions summarized in this section. The examples cited in the following few paragraphs are taken from the last named reference.

the risk of pre-eclamptic toxaemia and of premature delivery is doubled, and there is a higher risk of mechanical damage to the birth canal and of birth injuries to the child. Clinical impressions and some studies suggest that nutritional deficiency in the mother, resulting in anaemia, calcium deficiency, and difficulties in breast-feeding the child, is associated with high parity.

Several studies have documented the highly significant correlation between increasing foetal death rates and the number of pregnancies. The frequency of late foetal deaths has also been noted to rise with higher parity (and advancing maternal age) in countries such as Thailand, the United Kingdom, and the USA, although the incidence is also high in primigravidae. In the United Kingdom, perinatal mortality has been reported to be 54 per cent greater for the fifth and subsequent deliveries than for earlier deliveries, although no such association has been found in women of higher economic status.

Some studies have shown increasing infant death rates with rising parity. In Korea the rates ranged from 68 per 1000 for second births to 186 per 1000 for ninth births. Several studies have shown a higher risk of death from infectious disease for infants born into families that are already large; this may be accounted for, at least partially, by the increased risk of cross-infection. Attention has also been drawn to the relationship between high parity and problem families; a particular problem is deprivation of maternal care. The relationship between family size and intelligence is still unclear, although there is evidence for a negative correlation.

Late foetal and neonatal mortality rates have been reported to be lowest when the interval from the termination of one pregnancy to the beginning of the next is between 2 and 3 years. A progressive rise in infant mortality as birth intervals decrease has also been demonstrated.

Generally, the risk of the mother dying increases below the age of 20 and above the age of 30-35 years. In many countries complications of pregnancy and

delivery show the same pattern of risk, with the highest rates below 20 and over 35 years of age. Effects on foetal death, neonatal mortality, and prematurity show a similar age distribution pattern under 20 or over 34 years of age. A number of congenital anomalies are associated with advancing maternal age.

In the presence of certain serious hereditary disorders, the successful use of birth control methods may prevent illness and suffering. Genetic counselling may be offered as part of family planning advice.

Most of the correlations shown in these studies constitute associations rather than cause and effect relationships. The very relatedness of reproduction with social, economic, and cultural factors makes it difficult to define precisely the role of any particular variable such as parity, interpregnancy spacing, age at pregnancy, and family size, on health (Illsley 1967). The analysis of the data is complicated further by the strong association of low socio-economic status both with high and poorly controlled reproduction on the one hand and with high morbidity and mortality on the other (Wld Hlth Org. techn. Rep. Ser. 435 1969). For example, high parity is commonly associated with low socio-economic status, poor nutrition, poor hygiene, overcrowding, poor education, and resistance to change. These factors are all associated with each other and in turn tend to be linked with premature or difficult labour, low birth weight, trauma, and infection (Wld Hlth Org. techn. Rep. Ser. 266 1963).

Nevertheless, for several variables, correlation between a pattern of reproduction and its health impact appear in every class; socio-economic status ameliorates or aggravates the effect, but usually does not eliminate it (Morrison et al 1959). Commonsense suggests that the protection afforded by high socio-economic environment might have its limits too, as the demands for maternal care, for example, increase beyond the ability of any single individual to provide it. These studies of the epidemiology of unregulated reproduction have documented the situations where the practice of family planning, associated with other practices for health care, may prevent illness and death.

Health promotion by fertility regulation

The regulation of reproduction is good medicine beyond the limitation of existent pathology, and the prevention of probable malfunctioning. The impact of childbearing patterns on health must be looked at, not only from the viewpoints of "negative" health, but also, as much as possible, from concepts of "positive" health, in which well being refers to the quality of life beyond the mere preservation of physical existence (Peberdy 1968; Wld Hlth Org. techn. Rep. Ser. 137 1957).

Here, however, objective criteria for family planning may be more difficult to define, and indeed subjective elements represent key determinants. The social well being of a pregnant or potentially pregnant woman, her family, or the expected child, cannot be measured simply in terms such as age, family income, etc. Birth planning plays a clearly important role here, however. It would be valuable to be able to correlate more specifically the relation of family planning practice to such phenomena as marital satisfaction and social productivity (Lieberman 1970). Avoidance of unwanted conception makes sense, especially where abortion is prevalent.

Effects of methods on health

The direct effects on health of fertility regulating methods and techniques, and the side effects associated with specific agents, are discussed at length in this symposium.

Basically, the risk associated with any method must be compared with the risks of using other methods, or of not using any method at all. Considerations of either major or minor side effects are made in a context which includes evaluation of effectiveness and acceptability.

It is necessary to differentiate risks in wanted pregnancies from risks in unwanted pregnancies. The couple who want a pregnancy assumes a certain risk. Mortality and morbidity from wanted pregnancies should not be included when comparing the risks of a given method of fertility regulation with the risks of unwanted pregnancy.

Major side effects from methods, however rare, cannot be looked at only from their quantitative aspect. Although the risk of dying from unwanted pregnancy in a given setting may be much higher than the risk of dying from a given method, the nature of the side effect may make the method administratively and politically unacceptable.

Even minor side effects may assume major health importance to the extent that they influence the overall use of a method, or even, of any method at all. Supportive health care which provides appropriate management, reassurance, and encouragement, may go far in determining to what extent minor side effects will be tolerated, and in turn, whether a couple will avoid an unwanted pregnancy or birth and its associated morbidity and mortality.

Other effects on health of family planning methods include their influence on sexual satisfaction and sexual activity and their mental health implications, although documentation is sparse. Emotional and psychological changes may range from lessening of anxiety with regard to pregnancy, to changes in conjugal roles (Pohlman 1969). The sex education and marital counselling components of family planning may have a broad effect on health.

Health rationale for family planning: its importance

Family planning has been advocated probably more frequently from the viewpoint of its demographic or economic impact than from its effect on health. Irrespective of such other important considerations, health reasons for family planning have intrinsic and long-lasting importance. A clear definition of the health aspects of family planning helps establish family planning as an integral public health activity, allows it to take its place along with other vital public health concerns of our time, and provides guidelines for the setting up of appropriate services and facilities (Wld Hlth Org. techn. Rep. Ser. 442 1970).

Better understanding and appreciation of health implications are persuasive in involving health professionals in family planning, since it gives them an additional rationale within their own realm of understanding. Given their needed

role in carrying out family planning tas' s, this would seem essential. Politically, too, clarifying the health consequences of family planning is valuable, either for strengthening other objectives, or for making clear the distinction between family planning and population control where this is a political issue. In some parts of the world, undue emphasis on the demographic aspects of family planning may have retarded the development of services for family planning (Pradervand 1970).

Family planning in health services

Objectives for family planning vary, and include health, human rights, and demographic control. These objectives are not mutually exclusive, of course, and in many instances more than one of these objectives underlies social action. The health system's role in providing actual care and services for family planning is vital and central whatever national objectives may be (Polgar & Kessler 1968)*

General health and family planning activities: potentials for mutual support

It has become increasingly apparent that success of family planning efforts bear a direct relationship to the degree of development of health services. Countries with higher levels of health resources have been able to train health manpower relatively quickly to carry out family planning tasks. They have been able to exploit the multiple points of contact with the target populations offered by health services, and to provide the continuity of care and supervision that improve family planning efforts. These countries have had considerable success, whether measured by the reduction of foetal wastage, of maternal or child morbidity and mortality, by decreasing illegal abortion, or by decreasing birth rates. Better health resources, of course, are usually associated with other socio-economic factors that enhance successful family planning practice. Nevertheless, the values of an available health infrastructure are obvious.

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* The monograph by Polgar and Kessler 1970 contains detailed documentation for many of the conclusions mentioned in this section.

Advantages of channelling family planning through the system of health care are multiple (Wallace et al 1969, Requena 1969). Health workers have unique opportunities to contact people regarding family planning. Pregnancy, childbirth, illness, immunization, infant care projects, etc. are all opportunities for education, counselling and service. Women are highly receptive to family planning during the antenatal, natal and postpartum periods (Zatuchni 1968). Basic health workers not only have access to people at such critical periods, but also have the ability to establish quickly the intimate rapport which is particularly important in dealing with problems related to reproduction. The high cultural values placed on children in many societies can be turned into assets for the dissemination of family planning. Child spacing can be presented as a part of comprehensive child health care.

Traditional confidences in medicine and health services in some populations may be very important to counterbalance the mistrust of innovation represented by new family planning methods. In most countries health services have already made some impact for change and created precedents for the introduction of new health techniques. This helps reduce traditional resistance to innovation and is relevant thus to family planning.

Integrated services give family planning a medical bias. This has the advantage of putting the emphasis on the individual patient. Such individual focus may be important in convincing people that family planning may be of personal benefit to them - in addition to any possible general social benefits that accrue naturally from this.

With the relatively less efficient traditional contraceptive methods, which may require a high level of continuing motivation, fertility regulation may be enhanced by relating it to other ongoing general health programmes. The modern contraceptives, on the other hand, require more sophisticated health foci, and more qualified health personnel to provide the techniques as well as to supervise their follow-up.

The whole range of problems associated with reproduction, problems of sterility, pregnancy, spacing or limitation, the prevention of abortion, sex education, etc. require the personnel, the skills and the techniques of general health services. Family planning services integrated with general health services can focus on all interrelated factors and can better determine priorities and appropriation of resources in particular communities (Wld Hlth Org. techn. Rep. Ser. 428 1969).

The effectiveness of family planning in the health context is further strengthened by other considerations. The structure established by health programmes to collect information on births, deaths, disease, the performance of health personnel, and facilities, serves as a ready channel for the evaluation of the family planning components of health services.

There are logistical reasons also for integrating activities dealing with family planning with those concerned with other health needs of communities. Funding can be pooled, a stronger infrastructure developed, supervision strengthened, and duplication of facilities avoided. In the many areas of the world where mothers require an approach by female workers, these logistic questions are especially acute because of the shortages of such workers.

Fundamentally, the introduction of family planning into health services, involves tasks that are similar to those faced in introducing and providing any other medical and public health measure. There are problems of administration, of the training of staff, of relating the new services to the other on-going health activities, of team work, of reaching the target population, of developing appropriate health education programmes, of selecting specific methods suited to the community, of supply channels, of transport and of evaluation.

It would seem to be clear then that both from the effects on health and from the organizational viewpoint, services concerned with family planning are mutually supportive with those concerned with the general health needs of a community.

Possible strategies where health resources are scarce

The problems arise, of course, in situations where the health infrastructure is weak. Some of the largest programmes for family planning are being established in countries marked by widespread shortages of health personnel and facilities. Here the public health worker advocating the integration of family planning into the general health service has been confronted with objections that "family planning is too important to wait for the development of health services", that there is a need "to get on with family planning", that "family planning programmes will serve as the nuclei for general health services", etc.

In considering this question, the World Health Assembly of the World Health Organization recommended that service activities for family planning care be closely integrated with other health services. This conclusion was not based on any doctrinaire assumptions about the value of integration. Rather, it derived from long experience with mass and uni-purpose campaigns, campaigns which at that, were even within the health sector (Wld Hlth Org tech. Rep. Ser. 294 1965). These campaigns, whether directed to venereal diseases, malaria, leprosy, yaws, or environmental sanitation, have time and time again shown the limitations of the uni-purpose approach, its inefficient use of money, time and scarce personnel. It is true that in any mass campaign, some success will occur in the initial stages. Almost any new technique will attract its "acceptors" for an initial period of time, but the success is highly limited and in the past has even led to negative counteractions. The absolute necessity of "on-the-ground", permanent services in the community, providing continuity of care and a variety of curative and preventive services, is a lesson that should not have to be learned again in relation to family planning (Rosa 1969)

Where health services are less developed, the situation is, indeed, difficult. There are, on the one hand, those who, grudgingly agreeing to integrate family planning with other health services, look upon health personnel primarily as another

source of workers to give family planning services. Where health service personnel are in short supply, the first reaction is not to train more health personnel, but rather to point to the insufficiencies of the health personnel as reason to train single-purpose family planning workers. Such single-purpose workers they feel have the advantage of being able to focus entirely on one subject, one programme, one goal. However, coming with only one service to offer, and that a strange one, they are often viewed with suspicion. Separate, single purpose family planning clinics often stand under-utilized.

Others see family planning as an essential part of the work of all health service personnel: physicians, medical assistants, midwives, nurse-midwives, auxiliary midwives, nurses' aids, health educators, etc. Where more hands are needed to do the work, the reaction is to train more health workers. Midwives, nurses and auxiliary midwives in particular carry multiple services to mothers and children which are much needed and generally understood. When these persons tell families about family planning as a new service available to them their counsel is more likely to be listened to, believed, and followed. The auxiliary nurse midwives may often have to carry the heaviest load in following up and reassuring women using contraception (Eliot 1970).

Family planning can be introduced into whatever health services are available. In the beginning, family planning care may be confined to the simplest tasks of health education and the provision of conventional methods; later, more modern methods are added. A phased development over a period of time may be required involving first the hospitals and clinics in large urban areas, going on to smaller urban areas, then to semi-rural and finally to rural substations (Mazurki & Ten Have 1968).

In other situations, however, a government may want extensive coverage for family planning at once. The establishment of the needed minimal health infrastructure demands a commitment of manpower, resources and money. A flexible

approach resorting to other than tradition bound strategies can help achieve such an objective rapidly. A pattern of regionalized and localized services that include peripheral units in which auxiliary staff play an important role, has proved to be practicable in many parts of the world (Wld Hlth Org. 1969). Pragmatic "packages" of comprehensive health services can be provided by such peripherally based multi-purpose auxiliary personnel supported by a cadre of professionals (Taylor 1968).

Health, health services, socio-economic development and family planning practice

The level of health in any country has turned out to be a crucial determinant among the factors associated with the practice of family planning. The level of infant mortality, for example, which is a good index of health in any community, has been related consistently in an inverse fashion with the extent of family planning (Frederiksen 1969).

Generally, truly better health is correlated with changes from wasteful patterns of high mortality and high natality to more productive patterns of low mortality with natality regulated as desired - whether this involves an increase or decrease over previous levels (paradoxically, reduction in mortality, precisely the factor which is implicated as a major cause of population growth, turns out to be a principal pre-requisite for a reduction in natality). It is in those countries where mortality reduction especially in the younger age group, has not yet reached an apparently "critical" level that reproduction remains unregulated.

Medicine and public health, along with the modernizing influences of agriculture, education, industrial development, urbanization, etc. have all participated in improving health and decreasing mortality. The health sector, of course, can, with the skills and knowledge currently available, contribute greatly to child survival. Parents satisfied that health measures will keep alive the number of children desired are more likely to practise family planning. In addition, health measures have a unique ability to provide a rapid demonstration

that change is possible and desirable. - alth programmes can contribute greatly to the process of social development and enhance the willingness of people to take their destiny into their own hands. Improved levels of general health will encourage the orientation of people to the future, an outlook essential to all planning (Taylor & Hall 1967).

These conclusions call for continued efforts towards a build-up of an infrastructure of health services, an infrastructure aimed at all health needs, including family planning. With such an infrastructure both the general health objectives and the interrelated family planning objectives can be achieved and will be mutually supportive.

Careful health planning is required for the most judicious distribution and utilization of limited resources (Wld Hlth Org. techn. Rep. Ser. 350 1967). Current estimates of the costs of a worldwide build-up of basic health services indicate that these are well within the limits of available economic resources (Taylor & Berelson 1968). Technically, public health has developed the know-how for the organization of decentralized essential basic health services. From the political and humanitarian viewpoint such an approach is acceptable everywhere.

What is called for in a sense is "a mass campaign" for a basic infrastructure of health services, an infrastructure which will most successfully bring the berefits of general health services including family planning, to the largest possible number of people.

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