New Concepts in Contraception

A GUIDE TO DEVELOPMENTS IN FAMILY PLANNING

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Preface

Possible advances in contraception are a popular topic of discussion and publication. All too frequently the subject becomes little more than a review of current biological research with some hopeful and usually vague remarks about future applications to the problem of fertility control in man thrown in. The intent in this volume is more specific: it is devoted to family-planning methods that are available now or may be in the relatively short term. It discusses some of the logistic, as well as technical, limitations to the introduction of new techniques and it is concerned with barriers of attitude and politics, as well as the clinical and physiological problems facing family planning. The immediately practical here and now rather than the theoretical is covered, even at the expense of dealing with the unpopular, the unsophisticated and the sub-optimal: abortion, reversible contraceptive techniques and sterilisation are all mentioned—even at the danger of a semantic injustice to the title of the volume. There is no catalogue of possibilities that might come to fruition in the 1980s or later. All the methods mentioned are either used or could be used if made available, or at a stage of development where their usefulness is likely to be assessed over the next four years.

The authors come from a wide range of professional groups and each has considerable experience in some aspect of family planning. There has been no attempt to provide a total coverage of current advances in contraception, but a reasonable mixture of subjects has been attempted. The volume is intended for a broader readership than doctors and other medical workers—although ,clearly the medical profession is an outstandingly important section of those interested in family planning. It is hoped that administrators and all those involved inside family planning, as well as many outside the subject who look at it with interest and concern will find something of value.

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Introduction: *problems and strategy*

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1.1. Stimulus

The health, economic and demographic implications of family planning are taken to be self-evident. Women who are over 40 years old have nearly seven times the risk of death in childbirth than women under 20. An infant who is the fifth member of the family has twice the risk of dying at or around delivery than the first or second birth. The *daily* increase in the world's population is nearly three times the number of words in this book. The need for birth control both at the community and individual level is obvious and is being increasingly recognised. Access to family-planning advice has been declared a basic human right.

Human societies, unlike Boy Scouts, are rarely prepared. In 1939 when World War 2 began, Raymond Pearl published his *Natural History of Human Population*. His guesses about future population trends were well informed, based on long study and scholastically acceptable principles when concern was mainly about declining birth rates. Pearl foresaw a slow rise in global population to approximately 2600 million when it was expected that population would reach a plateau and he noted that this seemingly 'colossal total will be closely approached around A.D. 2100, providing nothing happens in the meantime to alter seriously the present trends on reproductivity . . . a total population of 2645·5 million would indicate an

average population density over the whole land area of the earth of about 57 persons per square mile, instead of the present 40. This seems no great increase. But world population is now at a point on its logistic curve such that, unless new and unique forces operate to alter its course, a slowing rate of growth will make itself increasingly manifest with the passage of time.'

During World War 2 an estimated 11·5 million combatants died, and an equal or greater number of civilians. After the war, DDT began to be used in malaria control, antibiotics (in addition to sulphonamides) became available and, for many nations, a period of relative stability, combined with some degree of economic development, began. 'Trends in reproductivity' did not alter significantly, but death rates, especially among the very young, began to fall rapidly. In parts of Asia, the average expectation of life for an individual at birth increased by nine months for each calendar year of the 1960s; in parts of West Africa there is currently only one death for every three births. Predictions for the year A.D. 2100 are now being made and are somewhat different from those of Pearl (Table 1.1). In less than four months the contemporary population of the world more than replaces all those who died in World War 2.

Table 1.1. ***Population projection for AD 2100 on three different assumptions.***

Date at which population is *assumed* to fall to replacement level		Population (1000 million) of the world when replacement level reached		
Developed countries	*Developing countries*	*Developed countries*	*Developing countries*	*Total*
1980	2000	1·5	6·8– 8·3	9·8
2000	2020	1·6	9·6–11·2	12·8
2020	2040	1·8	13·9–15·7	17·5

1.2. Response

It took nearly 20 years for the world as a whole to learn to feel the stimulus of the post-war demographic changes and to begin to respond to the problems created. Moreover, some national governments and certain international bodies—including the one with the largest number of field workers in developing countries—continue to ignore the problem.

Family planning has become institutionalised. Organised help is welcome at all times, but national and supranational bodies are undertaking a novel task and sometimes there is duplication, sometimes mistakes. In one SE Asian country almost thirty national bodies contribute to the family-planning effort. Funds for family planning often pass through a bewildering series of agencies before they buy a contraceptive or poster about family planning and the administrative costs of family planning are significant. Institutions must exist as they alone can raise the budgets and provide the technical assistance necessary, but, by virtue of their importance, they must also be considered as part of the total family-planning organism. The mechanisms of action of an administration like the mechanisms of action of oral contraceptives need elucidation. As an illustration, in chapter 2 Miss Suitters has traced the history of the International Planned Parenthood Federation (IPPF), the first and still the only international family-planning organisation independent of the U.N.

Among other non-Governmental agencies involved in family planning are three American-based associations. The Ford Foundation spends approximately 200 million dollars a year, one-third of which is spent overseas and family planning is one of the four priority areas covered in this overseas effort. Since 1952, the Foundation has spent 178 million dollars on population control, 90 million dollars on research and the remainder on services, some of which has been spent through other organisations such as the IPPF.

The Population Council was founded in 1952 and at that time had three professional employees. By 1971 it employed 150 professional workers with finance from the Ford Foundation, Rockefeller Foundation and USAID. In 1965 it began a *post-partum* programme of giving family planning advice to women who had been delivered of a baby. This programme has now been taken up by many governments and the WHO. In 1969 it began a study of the global costs of providing integrated family planning and maternal child health service. The Population Council has had technical assistance officers resident in 17 countries including Switzerland.

The Pathfinder Fund, based in Boston and founded by Clarence Gamble of the Proctor and Gamble industrial organisation, has a proud history of initiating projects in a large number of countries, with a great deal of flexibility and sometimes of risk taking. In 1970 it was responsible for 200 projects and a two million dollar budget.

In recent years an increasing number of organisations have begun

to make a contribution to family planning as well as to other types of aid and assistance, for example, the Protestant Church World Service, the American Friends Service, Lutheran World Relief, Oxfam, Care and World Neighbours. In addition, some American institutions, such as the Carolina Population Centre, with its 26 academic departments, the Michigan Population Planning Centre, Johns Hopkins, Harvard, and Sussex University in England, have all begun to contribute skills towards family planning. The National Institute of Health in the U.S.A. has a population Research Centre which has spent 50 million dollars in recent years. It is estimated that the total sum spent by all non-Governmental agencies combined, in the field of family planning, is about 200 million dollars.

Growth of this magnitude remains trivial relative to the scale of the problem to be solved. The budget of the IPPF at the end of the 1960s, when it had responsibilities in over 80 countries, was no more than a small part of the cost of waste disposal in New York.

The novelty of the post-war family-planning endeavour meant that the organisations that came to maturity in the 1960s had little previous experience to guide them either in the programmes they attempted to run in the field or in the planning of their own internal structure. They carried through a difficult task with dedication but as the first results (and non-results) of organised family-planning efforts became available it is appropriate to look at some of the internal administrative problems facing family planning in the 1970s—problems which can be every bit as significant as the pregnancy rate of condoms or the possibility of developing new orally effective contraceptive agents. Black (Chapter 3) looks at the limitations of current organisations and suggests ways around any administrative bottleneck. He is pragmatic in his approach and if he cannot sidestep a problem he is willing with the characteristics of a guerilla fighter to burrow under it in order to get birth-control advice to those that need it. A willingness to look objectively at the irrational barriers to family planning is necessary. To use irrational ways of overcoming them has always been one of the hall-marks of the real pioneer in family planning and it is a skill that remains necessary.

1.3. Contraceptive methods

With current technology, the control of human fertility, like the provision of adequate means of transportations, involves a number

of options, no one of which can fill all needs. Learning this lesson has been one of the most important steps in the organised family-planning effort of the past decade. China appears to have learned this lesson best (Chapter 12). Unfortunately, in some cases it has been a painful lesson and is not yet universally understood. In Australia, New Zealand and West Germany, about one third of married women are presently using oral contraceptives. In Korea, approximately one third of older married women in the later thirties have had an IUD inserted at some time or another, although only a proportion retain the devices. These figures are of course, exceptionally high and seem to represent saturation point for a single method. In any community not only do different couples use different methods but the same couple is likely to use a sequence of methods during a fertile lifetime.

The proportion of couples persisting with a specific method over unit intervals of time has been measured for a variety of cultural backgrounds for the medically-dependent methods such as IUDs or pills. The continuation rate for pills is usually less than that for IUDs but the women who accept this method are generally younger and of lower parity (Figure 1.1). Continuation rates for medically-dependent methods are often seen to be disappointing, although the evidence is that many who start these methods, or discontinue them, are switching to and from older conventional methods. It is symptomatic of the undue emphasis given to medically-based methods that little is known about continuation rates for condoms or coitus interruptus, although these are numerically more important methods.

The use of IUDs with copper added, as reported by Jaime Zipper and his co-workers from Chile in Chapter 11 may provide a device with a high continuation rate and low pregnancy rate—an order of magnitude better than currently-available methods. If the present performance continues it is a method that will have great attraction for family planning programme administrators. However, attempts to judge that one technique is better than another are not constructive and may reveal more about doctors and administrators than about the methods themselves. One aspect that has been consistently overlooked in nearly all formal family-planning programmes is the commercial distribution of contraceptives. Black and Harvey in Chapter 5 analyse this problem and suggest ways in which the balance can be restored.

It is instructive to look at the whole of family planning as a market-

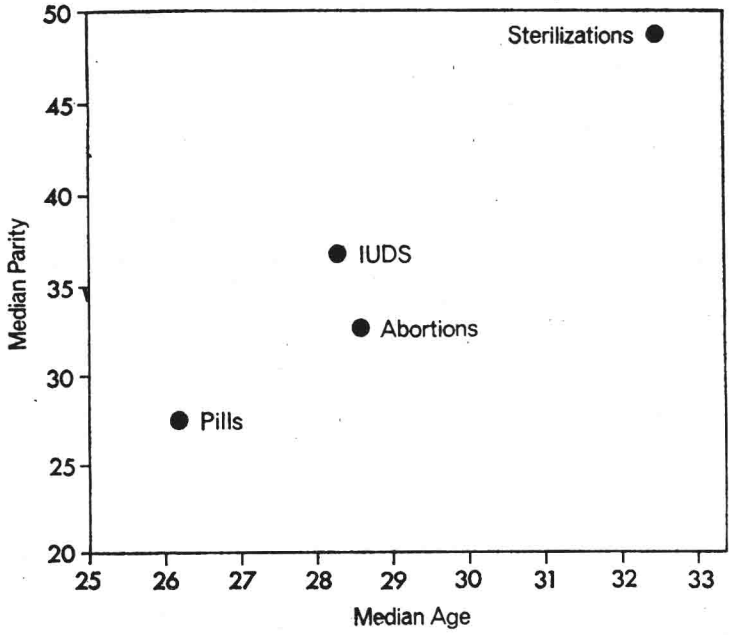

Fig. 1.1. Median parity *v.* median age for various contraceptive methods

ing procedure. When this is done, the involvement of medical personnel is seen as a capital intensive operation with high running costs and therefore limited role in some situations. Motivation is seen as creating consumer demand where much can be learned from established marketing techniques in other areas. Marketing itself can be regarded as a piece of action-oriented research, with a built-in capability of evaluation.

The private commercial sector of distribution is already making a substantial contribution to the provision of family-planning services, accounting for the overwhelming majority of family-planning efforts in developed countries and almost half of the contraceptive use in developing countries. The effective distribution of traditional methods of contraception *increases* the use of medically-based methods. This has been demonstrated in Turkey where a pilot distribution of condoms in a group of villages was associated with increased pill and IUD usage. On a national scale a high usage of medically based methods and conventional methods are usually associated. For example, in Latin America, the International

Planned Parenthood Federation supplies more condoms to Chile than any other country and Chile is also the nation with the most fully-developed national family-planning programme. It is important to find suitable outlets for the commercial distribution of contraceptives. The barber's shop, with its all-male environment and constant use at fixed intervals is a well-known retail outlet in Britain; in Barbados the rum shops fill a similar role.

On the one hand it is acknowledged that the commercial distribution of contraceptives has reached its present position often in the face of numerous restrictions. On the other hand, it is agreed that, given the correct impetus, the commercial distribution of contraceptives could be greatly expanded in developing and in developed countries.

Among the monetary factors influencing (and often limiting) patterns of distribution are national tariffs, excise duties and sales taxes, the availability of foreign exchange to purchase contraceptives outside the country or the ability to remit some part of the profits if the contraceptive is manufactured locally and limitations on he extension of credit facilities to small businessmen in the chain of distribution.

The distribution of any commodity involves promotional costs and requires freedom of action to advertise. Certain markets, especially in the rural areas of developing countries, may not promise sufficient potential profit to make effective promotion possible and, in this case, financial help has to be provided from elsewhere.

Advertising is an integral part of the commercial distribution of any product. It is a term that should be used widely to include the design of packaging and presentation of the product as well as the whole chain of events that bring a product to the notice of the consumer, whether it is the word-of-mouth passage of information or a television commercial. In this sense advertising is a necessary activity in both state-controlled and private-enterprise activities.

Packaging is important, if only because it may account for a significant part of a product's cost. For example, packaging costs represent approximately 30% of the cost of a packet of condoms. It is also a process that may be carried out locally on an imported product. The presentation of a contraceptive must be attractive and culturally appropriate for the community of users. In Chapter 6 Belsky explores this problem in a way that (remarkably enough) has not been considered previously.

The transmission of information through newspapers, radio and television, street boardings, direct mailing and in other ways is of paramount importance. Sometimes the creation of consumer demand by sophisticated advertising techniques produces results that are socially neutral or even against the interests of the community, but there can be little doubt that such persuasion is possible. In India, Singapore and some other countries advertising has been well used to transmit the family planning 'message'. Slogans, such as '*Two will do*', have been put about, but what has been attempted so far has been limited and carried out within certain implicit constraints. The promotion of a brand name is important. In India *Nirodh* is now synonymous with condoms, just as *Durex*[1] in Britain. This process could be extended. After all, family planning goals are more likely to be achieved by using Durex, even if a couple does not fully understand its own motivation, than by a total commitment to a '*Strong and Healthy Family*' (which is a slogan in use in Africa) without being motivated to use a method at coitus or to consume a daily pill.

Almost invariably the advertising of oral contraceptives is limited to transmitting information and brand names, to doctors. Again, the importance of brand names is illustrated by the fact that less than one doctor in a hundred would be able to write a prescription for oral contraceptives using the correct pharmacological terms and most users would be incapable of pronouncing the names at all. If family planning really is a socially significant goal then it would be logical and constructive to permit the manufacturers to advertise oral contraceptives and IUDs to the general public. Several levels of advertising would be possible. A consortium of manufacturers might advertise 'The Pill'. Where medical supervision of oral contraceptives was deemed necessary the message might be: '*Get the pill—see your doctor*'. The distribution of other commodities suggest that the slogan '*Buy Soap Powder*' is less effective than '*Use Omo*'. Simple direct messages are usually most effective: for example '*Ask your Doctor for Ovral*'; '*Get a prescription for Norlestrin, today*'; or '*Minovlar cost less than a packet of cigarettes and is safer—see your doctor*'. The doctor might prescribe a different pill for medical reasons or another method of birth control, but the woman would have sought advice. Where medical prescription is not considered justified the message can be even simpler. In South Korea pills are

[1] Registered trade names are only quoted by way of illustration.

not on prescription and television commercials and street signs are used. For example, signs attached to telegraph poles proclaim the message '*Eat Anoblar, the edible contraceptive*'. Many donor agencies now purchase contraceptives for distribution in developing countries. Usually one widely-used brand and one alternative brand with a different pharmacological formulation are chosen. Here new names could be invented and advertising costs might be underwritten by state money as part of a national family-planning campaign, rather than by the pharmaceutical manufacturer.

The apparent unsophistication of advertising contraceptives should not detract from potential usefulness. There are numerous reasons why buying a packet of pills from a supermarket after seeing a television commercial might be thought less acceptable than the seeking of professional advice from a clinic specialising in family planning and able to provide any method. Unfortunately the problem at the individual and community level is so great that 'radical' solutions of this nature must be seriously considered.

Should a pattern of contraceptive distribution be selected by abstract criteria or on evidence of what is likely to reach the greatest number of people in need? Sometimes the road with potholes and bad gradients really is a short cut and may even have to be used before a better route can be constructed. Medical ethics correctly assume a patient who is ill will seek out a physician and it is considered equally valid to suggest that curative therapies should not be advertised. Unfortunately, it is sometimes forgotten that Hippocrates lived before preventive medicine evolved; he envisaged neither vaccination nor the pill. Some societies are learning to try and prevent advertising spreading death by smoking; some people look forward to learning how to use advertising to improve health and welfare.

Spermicidal agents are already marketed through commercial channels. No doubt their distribution could be increased, by the means just considered, but perhaps the methods themselves are also open to improvement. Hardy and Wood (Chapter 7) provide one of the few comprehensive reviews of this neglected topic and note for the first time some potential developments such as the marketing of C-film.

Possibly there are a number of areas in the field of conventional contraception in which a relatively small investment could yield considerable improvement. However, for some time the main thrust of scientific research has attempted to create very effective and