

Reproductive Health: An Introduction to IUCD in India

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Abstract

The world has a population of 6 billion. India alone has a population of 1 billion. This is despite the fact that India was the first country in the world to have a population policy. It is important to understand the factors that led to this population explosion and the complex links between population growth rates and levels of development. Indeed, many feel that the family planning program shows little evidence of concern for the poor women it is supposed to serve. India was one of the first nations to officially launch a family planning program. A modest beginning was made in 1952 and IUCD (intrauterine contraceptive device) was initiated in 1965. About 100 million married women throughout the developing world have an unmet need for family planning. About one-third of these women, an estimated 31 million, live in India. Unmet need for family planning is estimated to affect 16 percent of married couples in India. This paper gives a historical perspective of India's Family Welfare Program focusing on the role played by IUCD. The Program has gone through various revamps shifting its initial target oriented approach to a more client centered approach. The National Population Policy 2000 resets the objectives of the program given the scale and diversity of India's population making it pro-poor, pro-women and pro-nature. However, poverty, illiteracy, and a shortage of resources remain the main barriers to the promotion and wider acceptance of family planning.

Key Words: *Reproductive Health, Intrauterine Contraceptive Device (IUCD), Population Policy, IUCD Prevalence*

Introduction

Thomas Malthus in the nineteenth century was perhaps the first person to expand upon a theory of population growth relating it to the increase/decrease in economic welfare. Malthus's theory was that populations tend to grow in geometric progression, while food supply increases at best, in arithmetic progression. He believed that only suffering could force population control. Rapid population growth would cause increase in expenditure for education, health, housing, water supply etc. The next generation would, as a result, be deprived of all these facilities, living standards would not rise and may even fall. Distribution of wealth would become more unequal by rising land values and rents while wages would be depressed. But, in this, he proved wrong. Poverty in European countries has not been a deterrent to fertility. On the contrary, a rise in living standards has been followed by reduced fertility. His basic theory has also proved wrong for developed countries where food production has by far exceeded population growth.

Malthus's thesis was severely criticized by Marx. He believed that the larger the number of working people, the higher the production, provided the fruits of labor were not stolen by capitalists. In principle, though not necessarily in practice, Marx's views are followed by present day economists. The rapid growth of the world's population in recent past and the anticipated further growth in the future have become matters of serious concern, especially in developing countries. World population is around 7 billion with the rate of growth being two to three times higher in developing countries than in developed countries.¹⁻³

Kuznets pointed out that high rate of population growth does not in itself constitute a major obstacle to the provision of the necessities of life. The important thing is effective exploitation of technical and economic potentialities.⁴ However, due to earth's limited resources one is forced to look back upon these theories, for in practice they often fail. Man has not been able to effectively control his own growth and hence, population control appears on the

national policies of many developed and developing countries.

Growth of World Population

The population of the world in general more than doubled during 1955 and 2000. Between 2000 and 2030, world population and that of Asia is projected to increase by one-third and that of Africa will almost double. During the same period, Europe is projected to witness a beginning decline in its population, a process projected to accelerate and to lead to a loss of some 100 million people (from 729 to 628 million) by the year 2050. One of the most important determinants behind these changes is a highly significant decline in total fertility rate per woman if all be approximated by the number of children that a woman will have in her lifetime.⁵ Inspection of the UN 1998 data reveals an impressive decline in fertility rates in all parts of the world. In fact, worldwide fertility started to decline already between 1955 and 1970, when it was already below replacement level in Northern America. It has reached very low levels below replacement level of fertility in Europe (1.6) and projections for the world might come to a halt around the middle of 21st century, or thereafter. But the situation is quite the opposite in Asia which houses the world's two most populous countries, India and China.⁵

It is of particular interest to compare the corresponding data from these two countries, given the notable difference in their family planning policies. The population sizes and fertility rates of India and China were respectively 2.72 and 1.84 in the year 2000. In January 1970, the population of China (831 million) considerably exceeded that of India (555 million), whereas the fertility rates of the two countries were the same. Thirty years later, in the year 2000, the fertility rate of China is considerably lower than of India, and is at the replacement level. The 2004 World Population Data Sheet projects that by the year 2050, the population of India (1628 million) will exceed that of China (Hong Kong and Macau included), projected to be around 1437 million.⁶ A recent report in the newspaper, *The Hindustan Times* projects that this may actually take place much earlier, that is, by 2035.⁷

Role of IUCD in Reproductive Health

In the words of eminent Professor Egon Diczfalusy, scientist philosopher and more, the world has seen and participated in at least 10 powerful revolutions that have profoundly changed our world view. He identifies these revolutions as “scientific, technological, information, post-industrial, globalization, environmental, contraceptive, reproductive health, gender equality, and demographic.”⁸ Each of the revolutions identified by Professor Diczfalusy has a relationship, some stronger than others, to family planning - the ability of individuals and couples to plan the number and spacing of their children.

India has no more than 2.5 percent of the world's land area, yet is home to one-sixth of the world's population. Since the 1930s, there has been a progressive fall in the death rate, while the birth rate has remained essentially unaltered; as a result the population growth rate has increased. In 1951, soon after its inception as a republic, India took stock of the existing situation in the country and initiated the first Five-Year Development Plan. The policy makers recognized the potential threat posed by the population explosion in the census figures of 1951. Thus, in 1952 India became the first country to formulate a National Family Planning Program.

The census of 1951 revealed that India's population was 361 million, with an annual growth rate of 1.25 percent. The literacy rate in men was 25 percent and in women, no more than 8 percent. Life expectancy was 32 years. Teenage pregnancies were the rule, and most couples had 3 or 4 children by the time the woman was 25 years of age.

In 1951, health care was available mainly in urban areas and was totally clinic-based. Efforts were made to make those women undergo surgical sterilization who had high parity and had completed their families. Vasectomy, though, failed to catch the attention of the public as a method of fertility regulation. To some extent this was responsible for the drop in maternal mortality rates observed in the urban areas during the 1950s. However, these measures had no

impact on the fertility rate or the population growth rate.

Rapid growth of the population in the previous 10 years, reported in the 1961 census, stimulated the Government to form a Department of Family Planning. The health infrastructure was still predominantly urban-based. An attempt was made to improve the availability and utilization of IUCDs and sterilization through an extensive education approach. During the 1960s, sterilization remained the basis of the National Family Planning Program. Based on the favorable results reported in clinical trials in major hospitals in India, the Lippes loop was introduced into the National Family Planning Program in 1965. Following the encouraging experience in these hospital based clinics, an attempt was made to improve the availability of the Lippes loop and to popularize vasectomy services in rural areas through the ‘camp’ approach i.e. temporary camps were set up and men encouraged to undergo vasectomy. Tubectomy services, however, remained predominantly in urban hospitals.

The census of 1971 showed that population explosion remained a major problem to be tackled. The Government gave top priority to the Family Planning Program and provided substantial funds for several new initiatives. The primary health centre infrastructure was expanded. Sterilization, IUCDs and condoms were made available through the primary health care centers as a part of the MCH services. The 1972 Medical Termination of Pregnancy Act enabled women with unwanted pregnancies to seek and obtain safe abortion services. Indian scientists also developed two IUCDs, that is, Soonawala's CuY and Merchant's CuR during 1970s. Based on the results of the clinical trials undertaken by ICMR, CuT 200 was recommended for inclusion in National Family Welfare Program in 1975.⁹ The hospital-based Postpartum Program provided contraceptive care to women following delivery.

From the early 1970s the emphasis was on mass vasectomy camps. During the period of 1975-1977, when a state of Emergency was declared in India, the use of coercion reached its crudest level. It included, for example, the demand for sterilization as a precondition for housing, for getting a job, for education of children, for registration of land, for obtaining seeds or fertilizers, and for receiving medical care. However, the birth

rates and maternal/infant mortality rates remained high, and unsafe abortions continued in some major states of the country, especially in the northern region. During the 1970s, IUCD insertion also showed a progressive increase, indicating that once follow-up services were provided, the women were willing to use an IUCD. 1976 saw the formulation of a national family planning policy.

In the 1980s the use of coercive methods continued, but the focus was shifted from male to female sterilization. With the availability of services in the primary health care centres catering to 30,000-50,000 people, the number of IUCD insertions in the country showed a steady and progressive increase. However, the increase in couple protection rate from 22.7 percent (in 1981-82) to 37.5 percent (in 1986-87) did not register a concomitant fall in birth rate.

Data collected in 1990-91 demonstrated that Copper-T 200 was the most widely used and effective birth spacing method in the national program. The ML Cu250, Nova T and CuT 380 A were also made available commercially. The Lippes Loop and CuT 200 and CuT 220C began to be locally manufactured. However, teenage marriages remained common in India and contraception before first birth was still a practice only among the urban elite. Pregnancy soon after marriage was the norm. The traditional practice of breast-feeding helped to attain birth intervals of 2-3 years. Most urban couples wanted two or three children, including at least one boy. A higher proportion of couples in rural area preferred three children. Almost 30 percent of deaths among rural females occur before the age of 15 and 15 percent occur during their reproductive years. Although in international comparisons India's maternal mortality is high, only about 2 percent of all female deaths are related to pregnancy or childbirth. Once a couple had desired number of children, the women mostly underwent sterilization, which remains the most commonly used contraceptive in India.¹⁰⁻¹²

Change in Family Planning Perspectives

India's population is huge (one billion) and the Indian Government has long

been supportive of family planning. Its efforts in the 1960s and 1970s, however, overemphasized demographic targets and were insensitive to users, large numbers of whom were coerced into using specific contraceptives (first IUCD, then sterilization). Target oriented approach was followed for 30 years until it was abolished in 1996. The country's family planning program used an approach based on the top-down from the ministry in Delhi to lowest ANM (auxiliary nurse-midwife) in the sub-centre. Over the years since then, many people and even the Eighth Five Year Plan document had criticized the so-called "target approach" because it distorted the attention of health workers away from meeting the health needs of people, and led to falsification of information. But inertia being what it is, it was not until 1995 and 1996 in the aftermath of the International Conference on Population and Development, Cairo 1994 that the government decided to abandon the system of targets. Today targets are gone on paper, but the mindset of targets-top-down and heavy-handed-approach has not changed yet for many of the functionaries in the family welfare program. Professor Srinivasan has rightly criticized earlier target oriented approach as HITTS model, that is, health department operated, incentive based, target oriented, time bound and sterilization focused.¹³

Future emphasis throughout India will be on increasing quality and choice of services (especially reversible methods), and targeting of underserved population. Obstacles to contraceptive uptake include preferring to have a son, high child mortality and status of women.¹⁴ Irrespective of their socio-economic status, majority of the population access public sector facilities for ante-natal care (60 percent), immunization (90 percent) and sterilization (86 percent). During the Tenth Five Year Plan 2002-2007, there will be continued commitment to providing essential primary health care, emergency and life saving services in the public domain. Services under national disease control and family welfare program will be provided free of cost to all, based on their need.

The above history of reproductive health in India was compiled on the basis of information available in Ramachandran, Minkler, Banerji, Balasubrahmanyam, Gwatkin, Demerath, Saxena, ICMR, Chaudhuri, & Gulati.¹⁵⁻²⁵

Unmet need for Contraception in Developing Countries

Mahmoud Fathalla provided the first definition of reproductive health in a chapter of the 1986-87 Biennial Report of the Research in Human Reproduction. His definition reads: "Health is defined in the Constitution of the WHO as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."²⁶ In the context of this positive definition, reproductive health is not merely the absence of disease or disorders of the reproductive process. Rather, it is a condition in which the reproductive process is accomplished in a state of complete physical, mental and social well-being. This implies that people have the ability to reproduce, that women can go through pregnancy and childbirth safely, and that reproduction is carried to a successful outcome, i.e. infants survive and grow up healthy. It implies further that people are able to regulate their fertility without risks to their health and they are safe in having sex. Reproductive health thus, encompasses a new, holistic vision of a number of problems, issues and interventions. In May 1994, the Global Policy Council of the World Health Organization adopted an official definition, taken verbatim from a document entitled "Reproductive Health Activities in WHO" prepared by the Senior Consultant to the Special Program of Research in Human Reproduction, Egon Diczfalussy, which reads:

Within the framework of WHO, definition of health is as a state of complete physical, mental and social well-being, and not merely the absence of disease, and infirmity, in the stages of life. Reproductive health therefore implies that people are able to have a responsible, satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last is safe, effective, affordable and acceptable methods of fertility regulation of their choice, and the right of access to appropriate health care services that will enable

women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant.²⁷

The Cairo Conference adopted this definition with only minor modifications. The most important change was the replacement of expression "fertility regulation" by "methods of family planning and other methods of fertility regulation which are not the law".^{8, 28-29}

Since the last quarter of this century a global reproduction revolution is taking place. A rapidly increasing number of people all around the world wish to control their fertility, and space or limit their child-bearing. The number of people who are able to do this in practice is also increasing quickly, due to the efforts of national governments, international donor agencies and volunteer organizations. After decades of struggling to have family planning accepted as a basic human right, the reality of every child born being a wanted child finally seems possible, though a distant goal.

Between the early 1960s and the year 2005 the percentage of couples in developing countries practicing family planning increased from a meager 10 percent to more than 50 percent.^{6, 30} From a meagre 30 million in the 1960s, the global number of contraceptive users had increased to 900 million by 2004, with a worldwide contraception prevalence of 59 percent (female sterilization: 18 percent; IUCDs: 12 percent; oral, injectable, and implantable steroidal contraceptive: 9 percent; condom: 5 percent; male sterilization: 4 percent; others: 9 percent).^{6, 31}

But even, with a worldwide contraceptive prevalence approaching 60 percent and the number of contraceptors approaching or exceeding one billion, an estimated 120-150 million who want to limit or space their pregnancies are still without the means to do so effectively.^{32, 33} Moreover, of the 182 million pregnancies occurring yearly, an estimated 36 percent are unplanned, and 20 percent will end in abortion.³⁴ In fact, in 1995, an estimated 26 million legal and 20 million illegal abortions were performed, corresponding to a worldwide abortion rate of 35 per 1000 women aged 15-44 years.³⁵ Every minute of every day, a woman dies as a result of pregnancy or childbirth; of which more than 99 percent of these deaths occur in developing countries.¹⁰ Prevention of unwanted pregnancies and provision of safe abortion services saves women's lives and prevents long-term disability. Family planning

is an essential part of reproductive health care. Furthermore, it also means that people are able to regulate their fertility without risk to their health and in the knowledge that it is safe for them to have sexual intercourse.³⁶

In most developing (excluding Africa) countries, where surveys have been conducted, at least half of all married women report that they do not want any more children. The scenario before the world is that over 300 million women do not have access to contraceptives, out of these the figures from developing countries is 120 million.³⁷ Almost 600,000 die as a result of pregnancy and 70,000 lives are lost each year due to unsafe abortion. At the same time, the message of the population report is clear: freedom of choice has to be left to individuals. For this reason, the report is called "Six billion: A time for choices". This point has been emphasized by UNFPA. "There is only one acceptable way to slow population growth and that is through freedom of choice. That means paying close attention to individual needs, reproductive health, education, and equality between women and men. On the positive side, the report observes that the overall annual rates of population growth have slowed from 2.4 to 1.8 percent since 1969."³⁸

IUCD Prevalence

About 100 million married women throughout the developing world have an unmet need for family planning. About one-third of these women, an estimated 31 million, live in India.³⁹ Unmet need for family planning is estimated to affect 16 percent of married couples.⁴⁰ While there are many factors that assist a couple in planning their family, it must be recognized that ultimately there are but three options for preventing pregnancy: abstinence, abortion and contraception. Abstinence may suit some couples for some of the time, while abortion may be unacceptable to many. Contraception is by far the preferred option for most couples wishing to plan their families.

The intrauterine device is safe, cheap, effective and convenient method of contraception, involving neither repetition nor interference with sexual activity. Even so, its acceptability is not up to the mark, mainly because of drawbacks such as

bleeding, pain, expulsion and infection. Its continued use depends a lot upon the attitude and social conditioning of the patient towards slight irregular bleeding, which happens commonly in the first few months, and also upon the attitude of operator and availability of other methods of contraception.⁴¹

World wide the IUCD usage has increased from being 85 million in 1991 to 130 million (11.9 percent), according to estimates based on findings of the demographic and health surveys published.⁴² Thus it is the second most commonly used family planning method, after voluntary female sterilization and the most commonly used reversible method.⁴³ About 70 percent of the world's IUCD users, i.e. 59 million women are in China.^{44,45} In the Indian Subcontinent 5.2 million i.e. 2.1 percent married women of reproductive age are using IUCD. Since the 1970s, IUCD use has remained stable or increased in most countries. In India only 4 percent of married women of reproductive age (MWRA) use IUCDs, where as in China and Vietnam about 30 percent of married women of reproductive age use them. In Vietnam the IUCD accounts for almost two-thirds of all contraceptive use.^{46,47} In South-East Asia, IUCD is the leading method in several countries. In Bangladesh, Philippines and Sri Lanka 2 percent or more of married women of reproductive age use the IUCD. While in Pakistan, only 1 percent use IUCDs, in Indonesia the figure is 14 percent.⁴²

IUCD use also varies in developed countries. In France, Hungary, Norway and Finland about 25 percent or more of MWRA depend on IUCDs where as in Canada, USA, Australia, New Zealand and Japan only about 5 percent or less use them. In USA, following complications and withdrawal of Dalkon shield in early 1980s, the manufacturers of the Lippes loop, Saf T coil, CuT 200 and Cu7 stopped supplying them from 1985-86. Only Progestasert was available in market then. Since late 1988 one of the best IUCDs, Cu T 380 A, is being marketed in USA under the name of Paragard. Outside China, the Lippes loop which are the oldest and commonest type of IUCD used throughout the world are gradually being replaced by medicated ones in both developed and developing countries.

Most of the IUCDs used in developing countries other than China are supplied free or at a subsidized rate by major donor agencies, particularly the United States Agency for International Development (USAID) and the

UN Fund for Population Agencies (UNFPA). In 1987 donor agencies distributed more than 10 million of IUCDs. Since 1980s donor agencies are supplying mostly CuT200 in place of inert devices like Lippes loop. They are also supplying CuT 380A since 1987 to most developing countries at a subsidized rate. In India the CuT 200 is most commonly used nowadays. The ML Cu 250, ML Cu 375, Nova T, Cu T 380 A and Cu Safe 200 are also available commercially but have very limited use among socially upward classes of women.

India introduced Lippes Loop in the National Family Planning Program in 1965. With the introduction of the Lippes loop, the program had an effective birth-spacing method available to couples who did not desire pregnancy, but who were not willing to undergo surgical sterilization. Initially, the Lippes loop was introduced into the family planning clinics attached to major hospitals. These hospitals had the infrastructure for effective screening prior to the introduction of the loop and for the provision of follow-up care. However, there was no infrastructure available to provide follow-up care and counselling to women in the rural sectors when side-effects and complications occurred. This soon led to the rural users becoming disenchanted with the device and a fall in the number of Lippes loop insertions in the country.

The CuT200 was inducted in the National Program in 1975. The discontinuation rate of different spacing methods in the program are not known but is generally believed that the discontinuation rate for IUCD is more than 30 per cent at the end of one year.^{22, 48} The situation is much worse for oral contraceptive pill. This was because a program centered on older women who have completed their desired family size does not pay dividends in terms of demographic impact. Realizing that a sound family planning strategy should advocate emphasis on younger women, efforts began to promote use of spacing methods (IUCD and OC) in the program. Among the spacing methods only 12 percent (4.5 percent of average couple protection rate of 37.5 percent) of the couples effectively protected are by IUCD. As regards to oral contraceptive pills about one per cent of the couples are effectively protected. These figures show that there is a need to strengthen these efforts and increase

the pace of desired change. It is proposed that sub-centers (SCs) and primary health centers (PHCs) which are major outlets for family planning services in rural area could play a major role in promotion of spacing methods.²³

National Population Policy 2000

The new National Population Policy (NPP) 2000 announced by the Central Government of India on 15th February, 2000 finally came out after two decades of deliberations. India's population growth is 2.1, Total Fertility Rate (TFR) is 2.85 and Contraceptive Prevalence (CP) is 48.2 percent.⁴⁰ A little known fact is that in large parts of the country, the number of children that a married woman actually wants to have (so-called "wanted fertility") is near the replacement level (i.e. no more than would be needed to replace the woman and her spouse). This was already true in states as wide-ranging as Andhra Pradesh, Karnataka, Maharashtra, Punjab, and West Bengal in 1992-93, when the extensive NFHS was conducted. In the states of Tamil Nadu and Kerala, wanted fertility has fallen below replacement level. In other states, such as Assam, Gujarat and Orissa, the number of children a woman wants is a bit higher but the average was under 2.5. The major states where it was above this were Haryana, Uttar Pradesh, Madhya Pradesh, Bihar and Rajasthan. In the northern states of Uttar Pradesh and Haryana, 75 percent of young women are illiterate, but family planning has achieved a CP of 27 percent, mainly by female sterilization.⁴⁹ Uttar Pradesh, Bihar, and West Bengal constitute 33 percent of the total population of India, which was 1.02 billion on March 1, 2001. According to a preliminary Census report, Uttar Pradesh registered a staggering 25.8 percent increase in its population since 1991. It added about 34 million people during this period, which is more than Canada's population.⁵⁰ What this means is that for about 60 percent of the female population at least, the change in mindset needed to achieve lower birth rates has been accomplished. In these parts of the country, women need better quality family planning services to achieve what they want, and it is perhaps their husbands who need counseling and motivation.

The policy announced "affirms commitment of the government towards voluntary and informed choice and consent of citizens while

availing of reproductive health care services, and continuation of the target free approach in administering family planning services.”⁵¹ The immediate objective of the National Population Policy is to meet the unmet need for contraception and health infrastructure. The medium-term objective is to bring the total fertility rate to replacement levels by 2010 through inter-sectoral action and the long-term objective is to achieve a stable population, consistent with sustainable development by 2045.⁵² Towards this end the goals set out include:

Making school education free and compulsory up to age 14; reducing IMR to below 30 per 1000 live births; reducing the maternal mortality ratio to below 100 per 100000 live births; promote delayed age at marriage; achieve 80 per cent institutional deliveries and 100 per cent deliveries by trained persons; universal access to information and counseling, and services for contraception with a wide basket of choices, 100 percent registration of vital events- births, deaths, marriages, and pregnancy; and prevention and control of communicable diseases, especially AIDS.

The strategies to achieve these goals include decentralized planning and implementation through panchayati raj institutions [i.e. local Councils]; convergence of health services at the village level; empowering women for improved health and nutrition; ensuring child survival interventions; involving diverse health care providers; strengthening IEC; developing increased partnership with NGOs and the private corporate sector; and finally, encouraging a range of clinical, laboratory and field research on maternal, child and reproductive health care issues.⁵³

It is evident historically that while the relationship between population and socio-economic development is complex and contingent on a number of inter-related factors, population is the outcome of socio-economic factors and not the other way around.

The NPP-2000 has generated a lot of expectations among the people. If this new policy moves on its intended track, it will be a great achievement for the nation. But any slide in its performance will have disastrous portents for future. The document clearly states that population growth in India continues to be high on account of demographic momentum (estimated contribution 58 percent), higher wanted fertility due to high infant mortality rate (estimated contribution about 20 percent) and higher fertility due to unmet need for contraception (estimated contribution 20 percent). Thus, we cannot be oblivious to the in-built demographic momentum in India's population because of its younger age structure which is expected to contribute around 60 percent of its expected population growth.⁵⁴ The usefulness of the Policy will be judged from its efficacy in implementation. Delaying the first, spacing the second, and stopping the third is the main objective of the Policy. It is to be seen whether the system of incentives for couples adopting the small family norm and opting to do away with disincentives will achieve the desired results because of the prevailing conditions.

The National Population Policy states that the objective of economics and social development is to improve the quality of lives people lead, to enhance their well-being and to provide them with opportunities and choices to become productive assets in society. Baby Astha who was labeled as one billionth Indian, was born on 11th May, 2000. India's current annual increase in population of 15.5 million is large enough to neutralize efforts to conserve the resource endowment and the environment. Stabilizing population is an essential requirement for promoting sustainable development with more equitable distribution. However, it is as much a function of making reproductive health care accessible as the provision and outreach of primary and secondary education, extending basic amenities including safe drinking water and housing, besides empowering women and enhancing their employment opportunities, and providing transport and communications.

The policy lays emphasis on the importance of effective development policies which are socially just with focus on the well-being of all people, but feels there is need for stronger emphasis on gender equality and equity in programs, strengthening the quality of family planning and health services, and

stronger institutional mechanism to ensure inter-sectoral participation to evolve workable procedures and operational guidelines. Further, a rapid increase in institutional deliveries is neither feasible nor desirable unless their quality and access can be dramatically improved. Rewarding panchayats and zilla parishads (local and district level councils) for exemplary performance should not translate into ground-level coercion, especially of poor women towards unwanted and safe sterilization or IUCD insertions.

Abortions are legal but legal abortions are not easily accessible.⁵⁵⁻⁵⁷ However, access to contraceptives can dramatically reduce the need for abortion. Rates of abortion and abortion related mortality will decline most where a full range of contraceptive options is readily available free of charge or at low cost; where there is widespread access to sex education and information; where the social-cultural context promotes contraceptive responsibility; and where abortion services are publicly funded so that, when needed, abortion can be done early in pregnancy. The empirical record is clear that the combination of good quality family planning and safe abortion will result in fewer embryos being destroyed and far fewer women will experience ill-health and death.

A measure of the success of health programs in India is the recently published World Health Organization's Health Report 2003 which states that the life expectancy of a girl in India has increased to 62 years.⁵⁸ However, much needs to be done to overcome social, religious and demographic disparities among urban and rural areas. Further, as Gita Sen states that they have not fully internalized the idea that, if women's reproductive health needs are met through good quality services, the women themselves will become the best supports of family planning program, because in the end, the burden of reproductive ill-health and many pregnancies, the sorrow of stillbirth and infant deaths falls overwhelmingly on women.¹⁴

The Way Ahead

Political commitment and bureaucratic efficiency in implementing the

health and family planning programs are imminent towards achievement of the Population Policy Goals. A step ahead has been the setting up of Rural Health Mission (RHM). The RHM is intended to cover the rural areas of 17 states having higher levels of infant mortality rate, maternal mortality rate and total fertility rate and lower levels of contraceptive prevalence. The RHM intends to strengthen the rural health infrastructure, especially at village level, in terms of medical and paramedical personnel, availability & accessibility to drugs, medicines and healthcare facilities. Under RHM schemes, PHCs/CHCs are to be strengthened for improved referral services. Over time all Community Health Centers (CHCs) are expected to operate as 24-hour First Referral Units through provision of more manpower, infrastructure, equipment and supply of essential drugs.^{59, 60}

Poverty, illiteracy, and a shortage of resources remain the main barriers to the promotion and wider acceptance of family planning. As our Health and Family Planning Minister at the World Population Conference in Bucharest, 1974, had elucidated that poverty, not overpopulation was the problem, adding that "development was the best contraceptive". An important lesson has been that adequate financial inputs and a sound health infrastructure are essential prerequisites for the success of a program. Integration of the health and family planning services ensures not only efficient and effective delivery of services, but also helps in building a rapport with the community, which is vital for the maintenance of the program. It has also been learnt that illiteracy and ignorance of family planning can be overcome with effective communication and counseling. Finally, it is absolutely essential to have respect for people and their wishes.¹⁰

Thus, the concept of reproductive health is being now seen in its wholeness. In an internal paper for WHO, Late Professor Ramalingaswami of India wrote, "I cannot be sure when the concept of Reproductive Health was born, christened and expounded as such. In WHO parlance, the term appears in the Biennial Reports of the Special Program. In the first chapter, entitled Continuity and Change, it is stated:

Reproductive health is an implicit goal of development. Yet poor health of the population can be an obstacle to national development, and other demographic circumstances can be

detrimental. In some parts of the world sheer numbers, large or small, can slow development, in others the high growth rates can pose limiting constraints upon government efforts to improve health and living standards of the population.”⁶¹

The concept has evolved over time through multiple streams of research and action in the field of reproductive biology, contraceptive development and family planning; the delivery system and the socio-economic and cultural profiles of end-user populations and end-user environments; the long-standing Maternal and Child Health Care System and more recent Safe Motherhood Initiatives, the Child Survival and development and “Women in Development” movement among others. An urgent need has been recognized to strengthen MCH services that have suffered as a consequence both of the collapse of the public health system and the focus on the family planning program. At the same time, there is a need to promote user-controlled, safe, effective and temporary methods of contraception. Equally important is the need to monitor and systematically study the health implications of contraception, including sterilization.

References

1. Tietze C. Population Growth and its Control. In: *Proceedings of the 4th Rehoboth Conference*. New York: Gruen and Stratton, 1968.
2. Singh K. Is the Best yet to Come? *Planned Parenthood Challenges*. 1994; 1:2-4.
3. Liu Z. Marx’s scientific theory of surplus population. *Population Research*. 1985; 2(3): 1-5.
4. Kuznets S. Economic Aspects of Fertility Trends in less Developed Countries. In: Behrmann S.J., et al, ed. *Fertility and Family Planning*. Ann Arbor: University of Michigan Press; 1966.
5. United Nations. *World Population Prospects. The 1998 Revision*. New York: UNFPA; 1998:10.
6. Population Reference Bureau. 2004 *World population Data Sheet of the Population Reference Bureau*. Washington, DC: Population Reference Bureau; 2004.
7. Where We Stand. *Hindustan Times*. New Delhi: July 12, 2004: 7.
8. Benagiano G. Reproductive Health as an Essential Human Right. *Advances in Contraception*. 1996; 12: 243-50.
9. Tejuja S, Saxena N C, Malhotra U, Chaudhury S D and Bhinder G. Two years experience with the copper T 200 in India. *Contraception*. 1974; 10:337-350.
10. World Health Organization. *Reproductive Health: A Key to a Brighter Future: Biennial Report, 1990*. Geneva: WHO; 1992, 1: 3-31.
11. Rao M. A Faulty Diagnosis: The World Bank’s Prescription for Indian Family Welfare Programme. *Political Environment*. 1996; 3.
12. World Health Organization. *Improving Access to Quality Care in Family Planning: Medical Eligibility Criteria for Initiating and Continuing Use of Contraceptive Methods*. Geneva: WHO; 1996.
13. Srinivasan K. The Population issues in the New Millennium: The legacy and challenges. In: Srinivasan K, Michael Vlassoff, Eds. *Population development nexus in India: Challenges for the New Millennium*. New Delhi: Tata McGraw-Hill Publishing Co. Ltd.: 2000.
14. Sen G. Targeting Mindsets: A Future, Past and Present. *Hindustan Times Special Issue*. New Delhi: 2000: 44.
15. Ramachandran P. Providing Family Planning: Lessons Learnt and Challenges Ahead-India. In: Van Look PFA and Perez-Palacios G, eds. *Contraceptive Research and Development 1984 to 1994: The Road from Mexico City to Cairo and Beyond*. Delhi: Oxford University Press, 1994.
16. Minkler M. “Thinking the Unthinking”: The Prospect of Compulsory Sterilization in India. *International Journal of Health Services*. 1977; 7(2): 237-248.
17. Banerji D. Community Response to the Intensified Family Planning Programme. *Economic and Political Weekly*. 1977; 12: 261-266.
18. Balasubrahmanyam V. Fix it, forget it: Norplant and Human Right. *Economic and Political Weekly*. 1993; 28: 1088.
19. Banerji D. *Health and Family Planning Services in India: An Epidemiological,*

- Socio-Cultural and Political Analysis and Perspective*. New Delhi: Lok Prakasan; 1985.
20. Gwatkin D. Political Will and Family Planning: The Implications of India's Emergency Experience. *Population Development Review*. 1979; 5: 29-59.
 21. Demerath N. *Birth Control and Foreign Policy: The Alternatives to Family Planning*. New York: Harper and Row; 1986.
 22. Saxena BN. Reproductive Health in India. *Advances in Contraception*. 1996; 12: 265-270.
 23. Indian Council of Medical Research. *Guidelines for Family Planning Services including Counselling, Screening, Procedure, Follow-up and Infection Control (MDP) Module 1 for PHC Medical Officers*. New Delhi: Indian Council of Medical Research; 1996.
 24. Chaudhuri SK. *Practice of Fertility Control. A Comprehensive Textbook*. New Delhi: BI Churchill Livingstone; 2000
 25. Gulati SC. Population Policies and Programs since ICPD, 1994: Issues and Challenges Ahead. *Demography India*. 2005; 1: 1-15.
 26. Fathalla MF. Research Needs in Human Reproduction. In: Diczfalusy E, Griffin PD & Khanna J, Ed. *Research in Human Reproduction (Biennial Report of the Special Programme of Research, Development and Research Training in Human Reproduction (1986-87))*. Geneva: WHO; 1988:11-16.
 27. World Health Organization. Definition of Reproductive Health. In: *Health Population and Development, WHO's Position paper for 1994 International Conference on Population and Development*. Geneva: WHO; 1994: 6-7. WHO/FHE/94.2.
 28. United Nations. *Report of International Conference on Population and Development*. New York: United Nations; 1994.
 29. Diczfalusy E. From the Contraceptive to the Anthropocentric Revolution (Gregory Pincus in Memorium). *European Journal of Contraceptive & Reproductive Health Care*. 1999; 4: 187-201.
 30. Ketting E. The Paradox of Progress (Editorial). *Planned Parenthood Challenges*. 1994; 1(1).
 31. United Nations. *Level and Trends of Contraceptive Use as Assessed in 1994*. New York: United Nations; 1995.
 32. United Nations Population Fund (UNFP). *Annual Report*. New York: UNFPA; 1997: 10.
 33. UNFPA. *State of World Population 2005. Reproductive Health: A Measure of Equity*. [Serial online]. 2005; 4. Available at www.unfpa.org/swp/2005/english/ch4.
 34. AGI. *Sharing Responsibility - Women, Society and Abortion Worldwide*. New York: Alan Guttmacher Institute. 1999; 1-56.
 35. Henshaw SK, Singh S, and Haas T. The Incidence of Abortion World Wide. *International Family Planning Perspectives*. 1999; 25 (Suppl): S30-S38.
 36. Senanayake P. *Contraceptive Use in Developing Countries. The Reproductive Revolution: The Role of Contraception and Education in Population and Development: The Proceedings of an International Symposium*. Vienna: The Parthenon Publishing Group; 1994: 57-69.
 37. Robey B, Rutstein SO, Morris L, Blackburn R.. The Reproductive Revolution. New Survey Findings. *Population Reports*. 1992: Series M-11.
 38. UNFP Report. Six Billion: A Time for Choices, UN Report on the State of the World Population- We are a Billion-strong Nation. *Hindustan Times*. New Delhi: September 23, 1999: 1.
 39. Population Reports. *Meeting Unmet need: New strategies*. Population Information Program. Baltimore: Johns Hopkins University; 1997: Series J-43.
 40. International Institute for Population Sciences (IIPS), ORC Macro. 2000. *National Family Health Survey (NFHS-2), 1998-99: India*. Mumbai: International Institute for Population Studies; 2000.
 41. Salhan S, Tripathi V. Factors influencing discontinuation of intrauterine contraceptive devices: an assessment in the Indian Context. *The European Journal of Contraceptive and Reproductive Health Care*. 2004; 9(4): 245-59.
 42. Population Reports. *IUDs – An Update, Series B-6*, Population Information

- Program. Baltimore, Johns Hopkins University; 1997: Series B-6
43. Population Reports. *Intrauterine Devices*, Population Information Program. Baltimore, Johns Hopkins University; 1990: Series B-5.
 44. Population Reports. *Intrauterine Devices*, Population Information Program. Baltimore: Johns Hopkins University; 1988: Series B-5..
 45. Camp SL. *A Guide to Method of Birth Control*. Washington, DC: Population Crisis Committee; 1991.
 46. Do TH, Hoang TV, Donaldson PJ and Quan L. The Pattern of IUCD use in Vietnam. *International Family Planning Perspectives*. 1995; 21(1): 6-10.
 47. United Nations. *Department for Economic and Social Information and Policy Analysis. World Contraceptive Use. [Wall chart]* New York: United Nations; 1994.
 48. Tripathi V, Nandan D, Salhan S. Determinants of Early Discontinuation of IUCD in Rural Northern District of India: A Multivariate Analysis and its Validation. *Journal of Biosocial Science*. 2005; 37(3):319-332.
 49. International Institute for Population Sciences (IIPS) . *National Family Health Survey (NFHS-1)(MCH and Family Planning) India 1992-93 summary Report*. Mumbai: International Institute for Population Studies; 1995.
 50. Population Booming. *Times of India*. New Delhi: March 30, 2000:10.
 51. Government of India. *Family Welfare Programme in India (Year Book 1998-99)*. New Delhi: Ministry of Health and Family Welfare, Department of Family Welfare, Government of India; 2000.
 52. Government of India. *National Population Policy. 2000. Health for Millions*. New Delhi: Ministry of Health & Family Welfare, Department of Family Welfare; 2000.
 53. Rao M, Jain D. National Population Policy 2000: Re-examining Critical Issues. *Economic and Political Weekly*. 2001; April 21.
 54. Kulkarni S, Jayachandran AA. Unmet need for family Planning – Analysis of NFHS data for selected states in India. In: Srinivasan K et al. eds. *Population development nexus in India: Challenges for the New Millennium*. New Delhi: Tata McGraw-Hill Publishing Co. Ltd.: 2000.
 55. Indian Council of Medical Research, *Task Force Study on Psycho- Social Factors Affecting Continuation and Discontinuation of the Intrauterine Device and Oral Pill in Urban India*. New Delhi: Indian Council of Medical Research; 1986.
 56. Indian Council of Medical Research. *An Evaluation of Quality of Family Welfare Services at Primary Health Centre Level. An ICMR Task Force Study (Summary Report)*. New Delhi: Indian Council of Medical Research; 1991.
 57. Chhabra R and Nuna S. *Abortion in India: An Overview*. New Delhi: Veerendra Printers; 1993.
 58. WHO's World Health Report 2003, Life Expectancy linked to development. *Hindustan Times (New Delhi)*, December 20, 2003: 7.
 59. Government of India. *National Rural Healthcare Mission*. New Delhi: Ministry of Health and Family Welfare, Department of Family Welfare, Government of India; 2004.
 60. Government of India. *India Country Report: Population and Development: 10 years since ICDP*. New Delhi: Ministry of Health and Family Welfare, Department of Family Welfare, Government of India; 2004.
 61. Ramalingaswami V. The Challenge and Opportunity of Reproductive Health. In: *Reproductive Health Activities in WHO*. Geneva: WHO Document, 1994: Annexure II.