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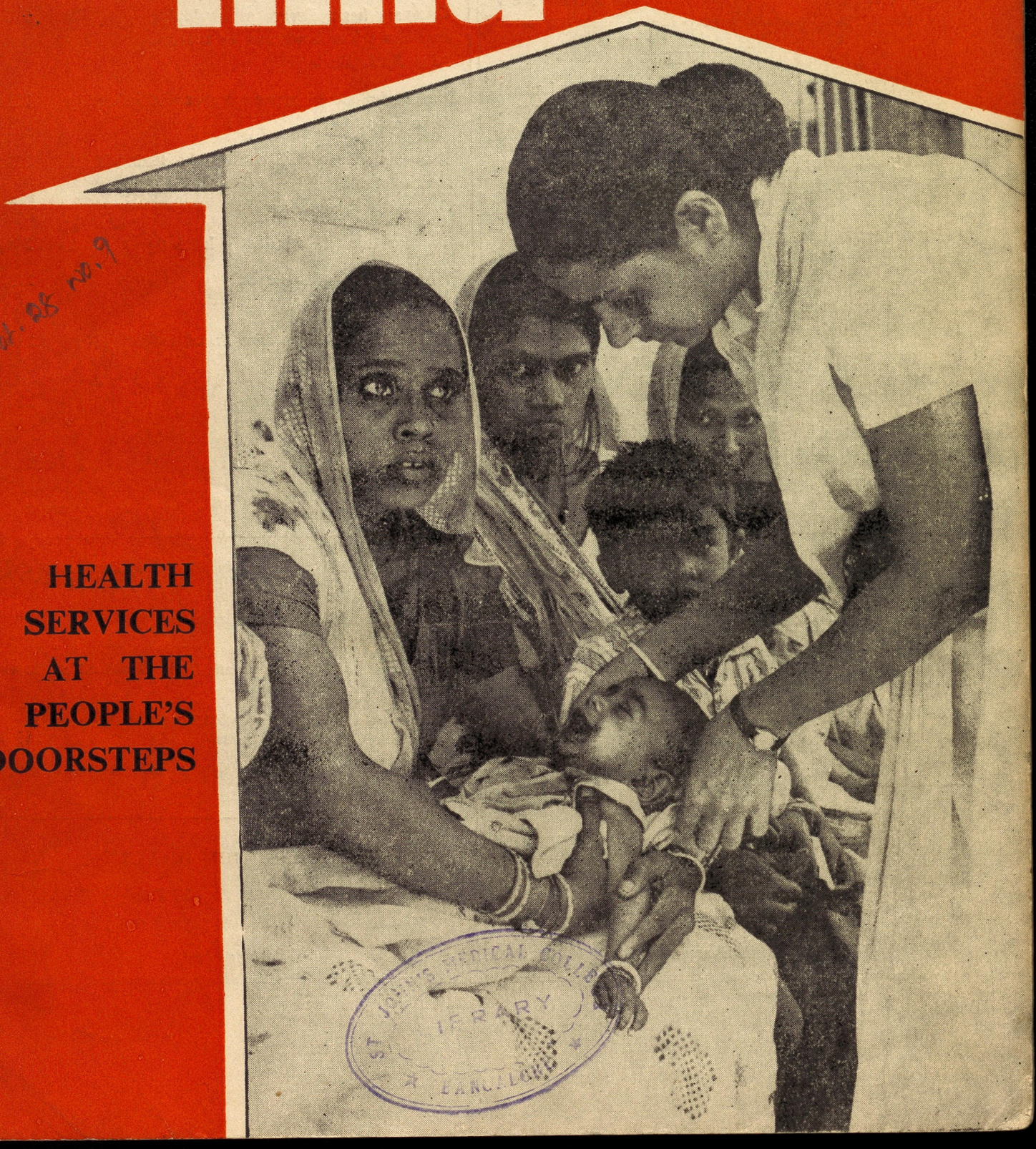

HEALTH SERVICES AT THE PEOPLE'S DOORSTEPS

swasth hind

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OBJECTIVES

Swasth Hind (Healthy India) is a monthly journal published by the Central Health Education Bureau, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India, New Delhi. Some of its important objectives and aims are to:

REPORT and interpret the policies, plans, programmes and achievements of the Union Ministry of Health and Family Welfare.

ACT as a medium of exchange of information on health activities of the Central and State Health Organizations.

FOCUS attention on the major public health problems in India and to report on the latest trends in public health.

KEEP in touch with health and welfare workers and agencies in India and abroad.

REPORT on important seminars, conferences, discussions, etc., on health topics.

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In This Issue

Articles on health topics are invited for publication in this Journal.

State Health Directorates are requested to send reports of their activities for publication.

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SWASTH HIND reserves the right to edit the articles sent for publication.

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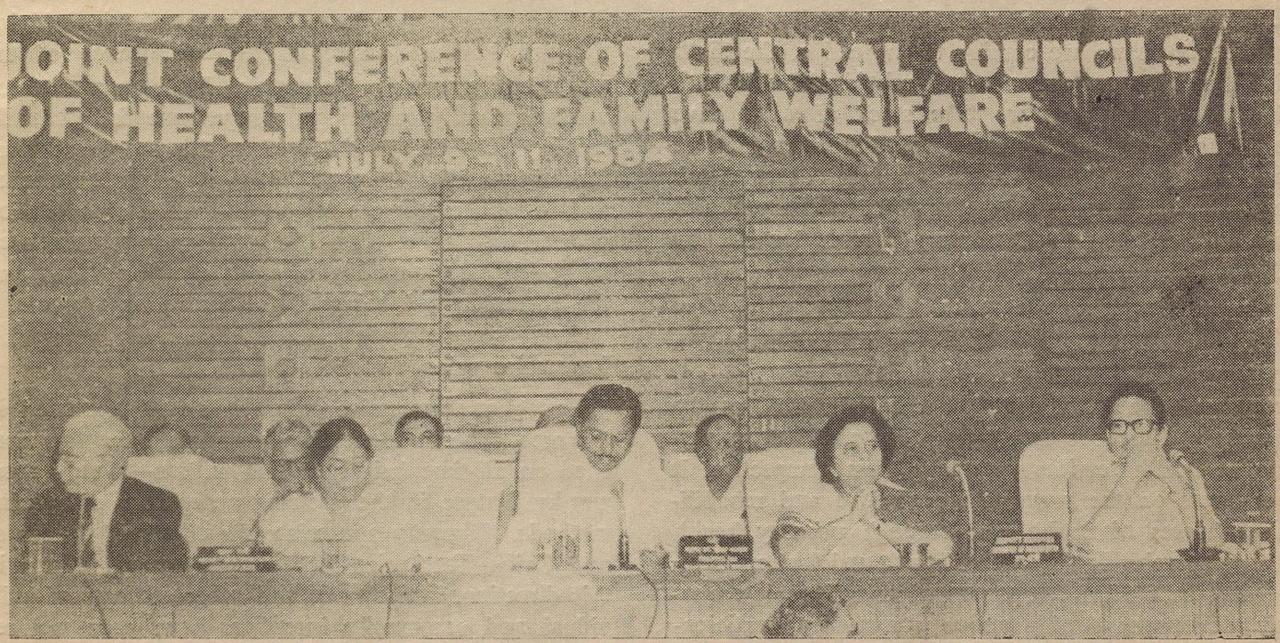


The Tenth Joint Conference of Central Councils of Health and Family Welfare was held from 9—11 July, 1984, in New Delhi. Photo shows Shri B. Shankaranand Union Minister of Health and Family Welfare, inaugurating the Conference. To his right are Smt. Mohsina Kidwai, Minister of State, and Shri C. R. Vaidyanathan, Secretary. To his left are Kumari Kumud Joshi, Deputy Minister and Dr D. B. Bisht, Director General of Health Services.

HEALTH SERVICES AT THE PEOPLE'S DOORSTEPS

—B. SHANKARANAND

"Our aim is to carry health to the homes of the people. Services and supplies should go where the problems exist. We have to fully utilise the large infrastructure of health and medical care provided in the country", said Shri B. Shankaranand, Union Minister of Health and Family Welfare, while opening the Tenth Joint Conference of the Central Council of Health and Central Family Welfare Council on 9 July, 1984 in New Delhi. Earlier welcoming the participants Smt. Mohsina Kidwai, Union Minister of State for Health and Family Welfare, said, "Family planning is vital to the Nation as it directly concerns with improving the quality of life of the people, raising their standard of living and thus making the Nation strong and prosperous". Proposing a vote of thanks Kumari Kumud Joshi, Deputy Minister of Health and Family Welfare, said, "Health and happy babies and proud mothers are the real index of social progress".

—Published here are the excerpts from the inaugural speech.

THE Tenth Joint Conference of the Central Councils for Health and Family Welfare has a significance as we are coming to the end of the Sixth Five Year Plan and are on the threshold of the Seventh Plan. It is time that we take stock of what have been our lapses, achievements, the difficulties that we have encountered, the pit-falls that have checked our speed in our march on the road of primary health care in achieving the goal for "Health for All by 2000 A.D.".

Since last meeting, the Government have evolved a National Health Policy which has discussed and approved by the Parliament. The policy provides the necessary directions for reorienting and reconstructing the health services with long term perspective. It lays stress on the preventive promotive and rehabilitative aspect of health care through primary health care approach. It also views health and human development as a vital component of overall socio-economic development with active community participation. The policy also lays stress on ensuring adequate nutrition, safe drinking water supply and improved sanitation. One of the salient features of the National Health Policy is the linkage which is sought to be established between the various developmental sectors which have a close nexus with health. This is on account of increasing realisation that the quality of life cannot be improved through isolated activities in the health sector alone and that it can be brought about only through a coordinated multi-sectoral development. It should now be the utmost concern of all agencies—Central, State and local—to evolve priorities and strategies for action, keeping in view the guidelines laid down in the policy.

National Population Policy

Controlling population growth is a national priority. While addressing the Seventh Joint Conference in 1981, the Prime Minister had observed that this was a problem of our very survival and that we should give shape to a National Population Policy based on principles of voluntary participation of the people. The National Health Policy clearly lays down the demographic goals to be achieved by the turn of the century—the Government is now in the process of evolving a more detailed and comprehensive National Population Policy. The National Population Advisory Council is engaged in considering the various Family Planning programmes and its recommendations would also help us to march further in the right direction to control the ever rising rate of population growth. There is a need to evaluate our existing schemes for information, communication and motivation and to find out whether we have been successful in bridging the gap between awareness and acceptance of the small family norm by the people. We have also to see whether family planning programme is gradually moving from the official fold to the people as mass movement. We have to learn from our experience and formulate schemes for an efficient implementation of the programme. Family Planning has to be related to health care, specially of women and children and the economic well-being of the family as a whole.

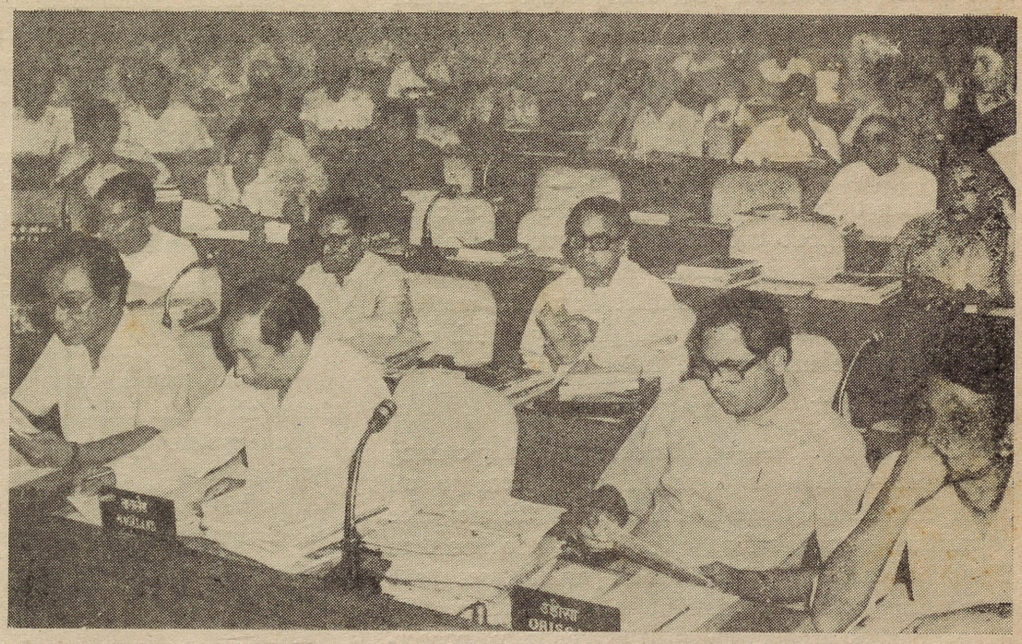
Impressive gains

Last year, impressive gains have been recorded in this area. The number of family planning acceptors reached an all-time height of 14.4 million—a very noteworthy feature in the growing acceptance of spacing methods. I greatly appreciate the efforts of the States and Union Territories for their determined efforts in this direction. The awards and other schemes of individual and community incentives have been well-received and I am confident that the States and Union Territories will take full advantage of these schemes.

Our aim is, as our Prime Minister has emphasised, "Not merely to curb the growth of population but to have happier and healthier families which, in our circumstances, means smaller families". We have been able to avoid 21.6 million births during the last four years.

During 1983-84, Maharashtra, Tamil Nadu and Punjab have been the best performing States in sterilisation while Pondicherry, Dadra and Nagar Haveli and Delhi had this destination among the Union Territories. In IUD, Maharashtra performance was outstanding with 245% achievement of the target followed by Punjab and Haryana with an equally noteworthy performance. Chandigarh, Andaman and Nicobar islands and Pondicherry occupied the first three positions among the Union Territories. In equivalent conventional contraceptives (C C) Users, top honours went to Sikkim, Uttar Pradesh and Haryana among the States and to Arunachal Pradesh, Lakshadweep and Dadra and Nagar Haveli among the Union Territories. In Oral Pill, the performance of Sikkim and Arunachal Pradesh deserve special mention.

It is a part of our national strategy to provide a network of health delivery service through establishment of sub-centres, Primary Health Centres and Community Health Centres so that the rural population could be effectively covered. At the beginning of the Sixth Plan we had 47,512 sub-centres in posi-



A view of the participants of the conference

tion and now as on 1 January, 1984, the total number of sub-centres established is 71,840. There is no doubt that purely in terms of physical number of sub-centres established, the achievement recorded so far is impressive. But we have not been able to achieve the target which we have set before us. While this is the quantitative aspect of the problem that we are facing, I would like to draw your attention to the qualitative aspect which requires considerable improvement.

You are all aware that we have not been able to place the required number of health workers in all the sub-centres which have been established and there are still areas where sub-centres are not functional at all. You have to give a serious thought to this aspect and take immediate corrective measures. We have done better in the establishment of PHCs and subsidiary health centres. However, here again, the absence of medical and para-medical staff creates problems in several areas and very often we find that the existing health manpower is unable to take care of the requirements of the people. We have schemes for giving both, in-service training as well as continuing education to the medical and para-medical personnel which are 100 per cent centrally funded. Unfortunately, these facilities are not being availed of fully by the States and Union Territories. In the establishment of such health centres we would also have to take into account the national directives to establish at least 10 per cent of the sub-centres in tribal areas.

Anti-leprosy strategy

With the call of the Prime Minister for the eradication of leprosy on the basis of a time bound programme, intensive efforts at case detection and treatment, application of multidrug regimen, extensive health education and rehabilitation of cured patients have become the mainfeatures of our new antileprosy strategy. Of the estimated 3.2 million population in the country suffering from leprosy, about 2.9 million have already been detected and 2.74 million brought under treatment. Multi-drug regimen projects have been taken up in 12 highly endemic districts and it is proposed to cover more such districts under this project. State Governments shall have to provide necessary infra-structural facilities by establishing District Leprosy Control Unit and providing equipment and trained personnel and ensuring close supervision. The total outlay for this Programme has been stepped up from Rs. 11.50 crores in 1983-84 to Rs. 15.00 crores in 1984-85.

Other diseases

Under the National T.B. Control Programme, detection and treatment of the cases continues to be done through a network of T.B. Centres established over a period. At present, 354 fully equipped T.B. Centres are functioning in the country. The remaining districts are expected to have these centres by the end of the current year. As against the initial outlay of Rs. 700 lakhs provided for this Programme in the 6th Plan, the expenditure till the end of 1983-84 was

1060 lakhs. The annual plan outlay has been further stepped up from 400 lakhs in 1983-84 to Rs. 1050 lakhs in 1984-85.

The National Programme for Control of Blindness aims reducing the incidence of blindness from the present level of 1.3% to 0.3% by the turn of the century. Cataract has been identified as the major cause of blindness. About two million cataract operations have already been performed. Infrastructure facilities are being strengthened at district hospitals, medical colleges, regional institutions and primary health centres. The States must ensure fuller utilisation of the facilities provided.

The incidence of malaria has been gradually coming down. However, it is a matter of concern to all of us that though there is a decline in the incidence of malaria from 6 million cases in 1976 to less than 2 million cases in 1983, P. Falsiparum cases have shown rising trend in some areas. Procurement for Malathion has been made a 100% centrally sponsored scheme. It is imperative that the surveillance and spray operations are carried out as per schedule and in time.

We have to further intensify our efforts to control and contain certain diseases like diarrhoeal diseases, viral jaundice, monkey disease (KFD). The outbreak of bacillary dysentery in West Bengal and the viral hepatitis in Gujarat and the Monkey disease (KFD) in Karnataka has been a cause of concern to us. Central assistance was provided to combat the diseases without any loss of time. Simultaneously, we have initiated actions to draw up short-term and medium-term strategies to have a better system of surveillance over such diseases. However, no amount of drugs or vaccines can obviate the need for sanitation and hygiene both at the personal as well as the community level. Comprehensive health education is the key to this problem and we will have to coordinate our actions both at the Central and the State level in this direction.

Emphasis on Indian Systems

The Indian Systems of Medicine are now receiving greater attention. The allocation for this sector was increased in the Sixth Plan to 29 crores in the Central Sector. The emphasis is mainly on improving and promoting the education and research programmes, production of herbal and other medicines and their standardisation. The elections to the Central Council have been conducted recently and the new Council of Indian Medicine has been constituted. While the National Institute of Ayurveda is being strengthened, the National Institutes of Yoga and Unani are being established shortly. Proposals for the establishment of a National Institute of Naturopathy are being finalised. The Indian Medicines Pharmaceutical Corporation established in Uttar Pradesh has made good progress in the manufacture of medicines of Indian systems.

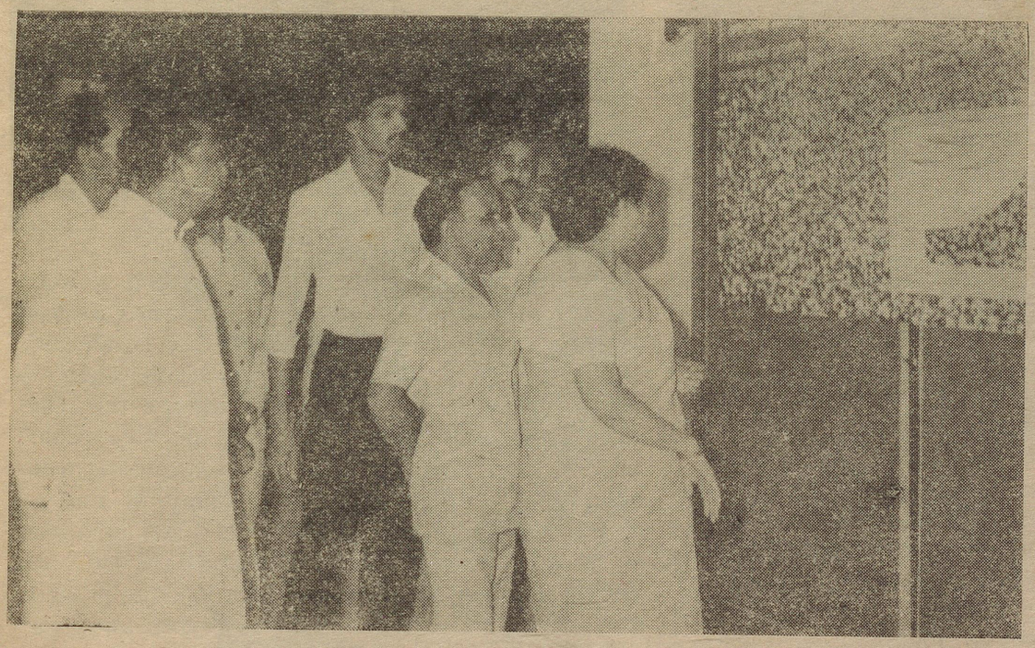
Medical education

We will not succeed in our efforts to provide preventive, promotive and rehabilitative health services to a large sections of our population living in the rural and remote areas of our country unless we bring about the necessary changes in the medical education system which is basically cure-oriented and hospital based. The provisions of the Indian Medical Council Act require a review in the view of the changed circumstances including the pernicious practice of charging capitation fee for admission to medical colleges.

There has been a phenomenal rise in the number of medical colleges since independence. About 106 medical colleges are engaged in teaching. The Medical Education Review Committee's recommendations are pending consideration of the Government with regard to the very system of medical education and manpower planning. In recent years, there has been a spate of private medical colleges in spite of the criticism that they are purely commercial propositions wherein capitation fee has replaced merit. Lack of facilities, equipment and trained personnel will reduce these medical institutions to that of parasites on the existing medical systems and turn out ill-trained doctors. The need of the hour today is the change in the medical education system, well-trained primary health workers and village oriented doctors trained in combating infectious diseases and promoting health consciousness amongst the people.

Medical research

In the field of medical research, efforts have been made to identify priorities in the fields of control of communicable diseases, fertility control, promotion of maternal and child health. Regional capabilities are being built up through the establishment of a net work of Regional Medical Research Centres. So far such centres are being established in Bhubaneshwar, Andaman & Nicobar Islands and Dibrugarh. Plans to establish a Tribal health Research Institute in Madhya Pradesh are also taking a final shape. A special scheme has also been designed to attract competent and talented medical graduates to a bio-medical research career.



Shrimati Mohsina Kidwai, Minister of State visiting the exhibition put up at the Conference.

Needless to say that a Nation's well-being rests on the solid foundation of a good health of its people. Man is the principal factor in his own development and in the development of the nation as a whole. The strength and prosperity of a nation come as much from economic progress as from health and human development. Efforts are on the way to restructure and reorient the entire health care system in the country by shifting the emphasis from more development of city-based curative services and super specialities to promotive, preventive and more positive aspects of health of our people, specially in the rural masses. The village Health Guide, the trained *Dai,* opinion leaders in the community and the Village Health Committees have been representing direct participation and involvement of the community at large.

We have been encouraging all systems of medicines in the country and accelerating the tempo of developing Indian systems of Medicines and Homoeopathy and promoting the post-graduate education with emphasis on research, standardisation and production of drugs on a large scale. The Indian systems of Medicines and Homoeopathy are now poised to take their rightful place in overall national efforts in improving the health status of the people.

Purity of food-stuffs and drugs

Ensuring purity of food-stuffs and drugs is of utmost importance to prevent diseases and safeguard the health of the people. The menace of food adulteration and manufacture of spurious and sub-standard drugs is of constant concern to us. It has to be fought both on social as well as administrative fronts. Without strong public opinion against anti-social elements, we will not be able to tackle the problems of food adulteration and spurious sub-standard drugs. On the administrative side, there is need to tone up the enforcement machinery and to plug loopholes. Any laxity on such enforcement can prove ruinous to our efforts on the health front. I trust that more deterrent punishment provided in the recent amendments of the Drugs and Cosmetics Act will greatly reduce the malpractices.

Increase in population can be generally termed as an indication of successful public health programme and administration, but it throws further challenge to the people, Government and ultimately to science itself. Many discoveries in the field of Biology, Genetics and Immunology are promised with a hope of findings of solutions in tackling the age old tropical disease. There has been constant endeavour in finding out new drugs to alleviate the sufferings of the sick and drug industry has assumed a very important role in the field of human health. The commercial consideration of profit—coupled with fierce competition have been a cause of concern. We have to see that life saving and other essential drugs do not go beyond the means and power of purchase of the poor people.

Primary health care

We cannot afford to have big hospitals at the cost of public health. Primary health care should be

(*Continue on page 203*)

Shri B. Shankaranand distributing Family Welfare awards

ANNUAL FAMILY WELFARE PERFORMANCE AWARDS

THE first Annual National Family Welfare Award function was held on 11 July, 1984, in New Delhi. Shri B. Shankaranand, Union Minister of Health and Family Welfare, gave away the Performance Awards for the year 1982-83.

Recognising the primacy of population stabilization in the country's efforts for socio-economic progress, the Government of India had decided in February 1983 to establish a scheme of Annual National Family Welfare Awards to States and Union Territories for their outstanding performance in the implementation of the Family Planning Programme. It is hoped that the introduction of this scheme would further help to enhance the performance of this programme. Evaluation and selection is based on the performance during the particular year as reflected in the increase in Couple Protection Rate, percentage achievement of targets, improvement in performance over last year, and quality of programme implementation. With a view to ensure that all States and Union Territories have a fair chance to win the Awards, States and Union Territories were divided into 5 groups. Fifteen States with population of over 1 crore were divided into 3 groups having regard to their Couple Protection Rates. Next category included States and Union Territories with population between 10 lakh and 1 crore; the last category consist of States and Union Territories with less than 10 lakh population.

Group A comprises the leader States in Family Planning Programme, namely, Maharashtra, Gujarat, Kerala, Haryana and Tamil Nadu. For the year 1982-83, the State of Maharashtra which achieved a Couple Protection Rate of 40% by 31 March, 1983, was awarded the first Award of Rs. 2.5 crore. Maha-

rashtra achieved 129% of its targets in terms of equivalent sterilization, recording a 3.3 percentage point increase in the Couple Protection Rate. The second Award of Rs. 1.00 crore was awarded to the State of Haryana which achieved 106% of its target in terms of equivalent sterilization, and a percentage point increase of 2.9 in Couple Protection Rate which reached 31.5% by 31 March, 1983.

Group B consists of this States of Punjab, Andhra Pradesh, Orissa, Karnataka and West Bengal. For the year 1982-83, the State of Punjab which achieved a Couple Protection Rate of 34.5% by 31 March, 1983, was awarded the first Award of Rs. 2.5 crore. Punjab achieved 153% of its targets in terms of equivalent sterilization, recording a 7.1 percentage point increase in Couple Protection Rate. The second Award of Rs. 1 crore in this Group was awarded to the State of Karnataka which achieved 72% of its target in terms of equivalent sterilization and a percentage point increase of 2.0 in Couple Protection Rate which reached 26.7% by 31 March, 1983.

Group C comprises States of Madhya Pradesh, Bihar, Assam, Rajasthan and Uttar Pradesh. The first Award of Rs. 2.5 crore for the year 1982-83 in this Group was awarded to the State of Himachal Pradesh which achieved a Couple Protection Rate of 23.6% by March 1983. Madhya Pradesh achieved 80% of its target in terms of equivalent sterilization recording a 1.8 percentage point increase in Couple Protection Rate. No second Award had been awarded for the year 1982-83 in this Group.

Group D consists of Jammu & Kashmir, Himachal Pradesh, Manipur, Tripura, Meghalaya, Delhi and Goa, Daman and Diu. The Award of Rs. 50 lakh for this Group was awarded to the State of Himachal Pradesh which achieved the Couple Protection Rate of 28.6% by March 1983. Himachal Pradesh achieved 125% of its target in terms of equivalent sterilization recording a 2.6 percentage point increase in Couple Protection Rate.

Group E comprises of Nagaland, Arunachal Pradesh, Pondicherry, Mizoram, Chandigarh, Sikkim, Andaman & Nicobar Island, Dadra & Nagar Haveli and Lakshadweep. The Award of Rs. 25 lakh for the year 1982-83 in this Group was awarded to the Union Territory of Dadra & Nagar Haveli which achieved a Couple Protection Rate of 20.3% by March 1983. Dadra & Nagar Haveli achieved 191% of its target in terms of equivalent sterilization recording a 4.0 percentage of point increase in Couple Protection Rate.

(*Continued from page 201*)

within the reach of our people. We have to avoid all possible waste in health and hospital administration and make use of our resources in the best possible way. Our aim is to carry health to the homes of people. Services and supplies should go where the problems exist. We have to fully utilise the large infrastructure of health and medical care provided in the country. Large number of medically trained men and women are attracted by the affluent countries with tempting offers of high salaries and other facilities, and thus we suffer from the loss of such a highly skilled manpower which is otherwise needed for the care of our country's rural poor. Effective implementation of the health programme through primary health care will definitely bring about health revolution in the country. Many diseases will be tackled and opportunities for specialised treatment and care will be created and preventive measures can be provided.

International health order

We have been collaborating with the World Health Organisation in its diverse fields of activities and have also entered into bilateral agreements in the field of health and medical services with a number of countries. Such co-operation, particularly with our neighbours and other developing countries in the South-East Asia Region will help us in tackling our immediate problem of controlling/eradicating the communicable diseases, besides enabling us to learn from each other's experience. India with its vast reservoir of trained medical manpower, is in a position to meet the immediate requirements of friendly developing countries and organising training programmes for their medical personnel. There are a number of identified areas in which we can render assistance to the developing countries. We have already offered to provide training facilities to various grades of functionaries, services of experts, drugs and equipment etc., to some of the countries both under WHO's TCDC programme and South-East Asia Regional Cooperation Programme. Our aim should be to extend co-operation in the field of health from Regional to inter-regional and ultimately to global level. It will be only through such efforts that we would succeed in achieving our cherished goal of 'Health for All by 2000 AD' and establishing an international health order. The Health Ministers of South-East Asian Region of WHO have earlier met in Jakarta, Dhaka and Nepal and are now scheduled to meet in New Delhi in September, 1984 with a view to ensuring regional co-operation for improving the health status of the people in the region. △

WATER SUPPLY TO RURAL AREAS

THE provision of drinking water supply to villages has been given high priority in the National Sixth Five Year Plan (1980-85) taken up for implementation with effect from April 1980. In order to identify the villages which need immediate attention, a countrywide survey was conducted at the instance of the Government of India by the respective State Governments/Union Territory Administrations. The criteria for identification of problem village prescribed by the Government of India were:

—Villages where no water source existed within a distance of 1.6 kilometre or where water was available at a depth of more than 15 metres. (In hilly areas, Villages where water sources were available at an elevation difference of more than 100 metres from the habitation); or

—Villages where the water sources were having excessive salinity, iron, flourides and/other toxic elements hazardous to health; or

—Villages which were exposed to the risk of water-borne diseases, such as cholera, quinea-worm, etc., due to the available water.

SIXTH PLAN STATUS : PHYSICAL & FINANCIAL

The State/Union Territories came out with an aggregate figure of about 2.31 lakh villages identified as falling in anyone of the above criteria that remained to be tackled for safe water. These villages have been termed as "Problem Villages". In other words, it may be stated that out of about 5.76 lakh villages as per 1971 census, about 3.45 lakh villages were having some sort of drinking water supply at the beginning of the Sixth Plan. In the Sixth Five Year Plan (1980-85), the outlay provided for creating water supply facilities in the identified problem villages under the State Sector Minimum Needs Programme and under the Centrally Sponsored Accelerated Rural Water Supply Programme is Rs. 1,407.11 crores (subsequently increased to Rs. 1,444.11 crores by an increase of Rs. 20 crores in Andhra Pradesh and Rs. 17 crores in Karnataka) and Rs. 600 crores, respectively. The Sixth Plan Document envisages the target of covering about 1.90 lakh identified problem villages with at least one safe source of drinking water.

20-POINT PROGRAMME

However, in January 1982 the new 20-Point Programme was announced and supply of drinking water to all problem villages was included as Point No. 8. It has been stated under this point that 'during the Sixth Plan the effort will be to cover all the identified problem villages with at least one source of safe potable water available throughout the year'.

The State Governments/Union Territory Administrations were consulted in the assessment of funds required for successful implementation of the Point No. 8 and it has emerged that to cover 1981 population of the 2.31 lakh identified problem villages at 1982-83 prices, about Rs. 3,725 crores would be required. Leaving apart the requirement of funds for covering all identified problem villages, there are some States where the target may not be achieved due to other constraints. However, the Government of India is endeavouring to achieve maximum coverage in these States also.

Progress up to 1982-33

As reported by the States/Union Territories, 25,978 identified problem villages (11.25 per cent of target) were provided with water supply in the first year of the Sixth Plan, (1980-81) and a total expenditure of about Rs. 320 crores including expenditure under the Centrally Sponsored Accelerated Rural Water Supply Programme was incurred. In the second year of the Sixth Five Year Plan, the State/Union Territories reported a coverage of 29,837 problem villages which is about 13 per cent of the target. The outlay available was Rs. 346 crores. The new 20-Point Programme was taken up for implementation with effect from the year 1982-83 and vigorous efforts have been made to raise the financial resources for provision of drinking water source in problem villages. Originally, an outlay of about 388 crores including Rs. 127.50 crores under the Centrally Sponsored Accelerated Rural Water Supply Programme was provided in the Annual Plan for the year 1982-83. In order to achieve the target of the new 20-Point Programme by the end of Sixth Plan, the Government of India provided additional funds of Rs. 24 crores under the Centrally Sponsored Accelerated Rural Water Supply Programme during 1982-83. With the funds of Rs. 412 crores made available during the year, the States/Union Territories have reported a coverage of 45,844 problem villages.

Thus during the first three years of the Sixth Plan 1,01,659 problem villages had been provided with at least one safe assured source of drinking water leaving a balance of roughly 1.30 lakh villages to be tackled during the last two years of the Plan.

Programme for 1983-84

The approved provision under the State Sector Minimum Needs Programme for the year was Rs. 318.414 crores and that under the Centrally Sponsored Accelerated Rural Water Supply Programme was Rs. 199.60 crores. However, the Centre also provided a sum of Rs. 75 crores under the New Centrally Sponsored Rural Water Supply Programme based on performance. Under this scheme States/Union Territories who performed well during the year were given additional funds to implement the water supply schemes to specific villages, schemes for which were technically cleared by the Government of India.

Programme for 1984-85

The approved outlay for 1984-85 are:

1. State Sector Minimum Needs Programme : Rs. 364.00 crores.
2. Centrally Sponsored Accelerated Rural Water supply Programme: Rs. 242.50 crores.

In addition to the above more funds are to be provided under the New Scheme based on performance.

—PIB

VAST SCOPE FOR PREVENTIVE CARDIOLOGY

GIANI ZAIL SINGH
President of India

The President of India, Giani Zail Singh, inaugurated the World Congress on Coronary Heart Disease on 6 April, 1984, at Bombay. The World Congress was jointly sponsored by the National Society for Prevention of Heart Disease and Rehabilitation, and Cardiological Society of India. The President said, "This coming together of experts from many parts of the World will prove beneficial to you, to the people and to the medical science as a whole". We publish below the article based on the speech given by the President.

THE incidence of heart disease is increasing at a fast rate. It was felt that it was only the aged and old that get affected by the disease. But these days, heart disease is no respector of age and that even many young people are becoming its victims. As a common man understands, it is generally believed that stresses and strains of modern life cause heart disease. This is a very broad generalization. May be it is constitutional in some cases and due to many other reasons, like food and activities of daily life. However, one can notice an increase in its incidence along with an increase in industrialisation with all its consequences. Take for instance the absence of any physical exercise in the life of many business executives or industrial entrepreneurs. Again the incidence is more in urban conglomerates than in rural areas. This may be again owing to adverse effects of pollution and lack of fresh air.

It is not any one single reason that is responsible for heart disease, but a combination of many factors.

In India rheumatic heart disease is the commonest heart disease—mostly found among the poor. In the city dwellers coronary artery disease is more common and forms the bulk of patients going to the physicians practising in big cities. Although statistics for the whole country are not available, about 30% of patients in various heart clinics in big hospitals belong to coronary heart disease. If to this is added the related problem of high blood pressure, then upto 50 per cent of attendance in the heart clinics consist of these two diseases.

The incidence of both coronary disease and high blood pressure has been showing a rise with the advancement in industry and technology of the society. In the advanced industrial country like America, 25% of all deaths in 1905 were due to coronary heart disease or its complications, which rose to 55% by 1955 and at present 70 per cent of all deaths are due to cardiovascular causes dominated by coronary heart disease. Coronary heart disease has been described as the greatest epidemic mankind is facing now. In India, too, this disease is taking a great toll of life and especially at younger age group—when the victim is in his most productive years.

The reasons for this great rise in this number one killer in most of the industrialized countries are as-

cribed to the changed life style, over-eating, less physical exercise and living in an environment of stresses and tensions. There have been many advances in the treatment of this disease including the role of surgery which have helped many patients suffering from the disease. In spite of so many advances in the treatment, it is sad to see that hospitals are still overcrowded with heart patients.

Role of preventive care

What is then the answer to solve this problem of the epidemic of coronary heart disease? The noted American Cardiologist Paul White used to say "Heart Disease before the age of 80 is our fault and God's or nature's will". By saying this he implied the role of preventive care to reduce the occurrence of coronary heart disease. It is very interesting to note that during the 10 years (between 1970 to 1980) death rate from coronary heart disease in America and some other countries has come down by 20%. This has been reported to be due to:

(a) changes in life style, including more natural diet containing less animal fats, cholesterol, sugar and decrease in cigarette smoking.

(b) people taking to more physical exercise like jogging and out door games.

(c) improved medical care—specially acute intensive care.

Spiritual awareness

Over and above all these, another phenomenon which might play an important role in preventing coronary heart disease by bringing about a change in life style may be added. This factor is the awakening of the spiritual awareness on our planet, specially in the western world. In the last decade or so and in this, Yoga and meditation have been in the forefront. A gradual transformation of consciousness is occurring regarding food habits, living styles and relaxation habits through yogic ways in the present society where competitive and stressful way of living is being held responsible for increase in the heart diseases. Practice of yoga and meditation along with modification in diet habits can certainly go a long way, as preventive measures, to bring down the incidence of heart disease. Mind has a very powerful control on all systems and organs of the body and most important out of all these is the control on heart. Regular practice of yoga and meditation has been found to improve the heart function and control blood pressure. In this way, yogic techniques may play an enormous role in preventive medicine of the future. Ayurveda itself deals more with prevention of diseases rather than curing diseases. Once heart disease has occurred, curative treatment is very costly. The so-called 'intensive care units' are in fact proving out to be 'expensive care units'.

Eminent scientists and physicians, therefore, should put their efforts in finding out more of the so far unknown coronary risk factors that result in coronary heart disease and then accordingly institute the preventive measures.

Improving the eco-systems

Modern man takes pride that he has acquired control over nature and even conquered the nature. Accordingly, he lives in an artificial life of his own creation, for getting that he is the child of nature. Science and technology are there for us to take advantage from nature, not to disturb the balance in nature. Man must learn to lead a contented and a happy life along with nature, not at the cost of nature. Perhaps, it is this realisation that is now being manifested through world-wide efforts for improving the eco-systems. As India is still in the early stages of industrialisation, it is necessary to keep these vital aspects in view while planning for economic development. The incidence of the disease could be reduced considerably by improving the environment.

Eminent scientists have assembled here to deliberate upon this leading killer in the modern world. Great strides have taken place in the world in the field of cardiovascular diseases both in the realms of investigations and management. There is a vast scope for preventive cardiology to play a greater role in combating disease of the heart. This gathering of many experts in the field will prove beneficial as it enables all of them to exchange ideas and experiences and to chart out future programme of action. Utmost importance is attached to the view that the knowledge so acquired and accumulated should be made available to people through various media. This kind of knowledge will help in preventing the disease itself △

Coronary heart disease in developing countries: the threat can be averted

SILAS R. A. DODU

As from the 1984-85 biennium, WHO's coronary heart disease (CHD) prevention programme will be more active than ever, thanks to supplementary funding granted by the Director-General on the enthusiastic recommendation of the Thirty-sixth World Health Assembly. The enthusiasm of the Health Assembly, and of the Executive Board at the session preceding it, was largely generated by the ambitious yet realistic strategy for CHD prevention outlined by a WHO expert committee. In its report, which was unanimously praised by the Executive Board, the expert committee emphasized the necessity for changes in whole populations, not merely individuals, if this mass disease is to be brought under control. In high-incidence industrial countries the levels of the main CHD risk factors are too high in the majority of the population, and most cases occur among the many people with "average" risk, not among the smaller number with exceptionally great risk factors (such a very high blood cholesterol, severe hypertension, and diabetes). What is required in the developed countries is a shift towards normality in the overall distributions and averages of risk factors. A different kind of population approach is called for in the developing countries, whose specific problems and special opportunities for "primordial prevention" of the CHD are examined in the following article.

CORONARY heart disease (CHD), today the most important cause of premature disability and death in industrial countries, is not an unavoidable concomitant of socioeconomic development, nor is it an inevitable consequence of an aging population structure. Recent evidence that CHD mortality is declining in certain affluent industrial societies,[1] and the demonstrated feasibility of reducing risk factor levels in whole communities by the adoption of healthier lifestyles,[2,3] provide justification for timely preventive action. Such action is particularly needed in populations that have a low incidence of CHD at present, in order to prevent its growing into a major health problem.

In some developing countries, CHD has already emerged as a prominent public health problem afflicting especially men in the prime of life when their productivity and social and family responsibilities are greatest. In others, CHD poses a serious potential threat to health, and the probability is that, unless this threat can be averted or contained, it will soon reach proportions approaching those of the industrial countries.

Significance of present trends

As a result of the continuing decline in mortality from infectious and parasitic diseases, the life expectancy at birth in developing countries as a group

[1] PISA, Z. & UEMURA, K. Trends of mortality from ischaemic heart disease and other cardiovascular diseases in 27 countries, 1968—1977. *World health statistics quarterly*, **35** (1): 11 (1982).

[2] FARQUHAR, J. W. The community-based model of lifestyle intervention trials. *American journal of epidemiology*, **108** (2): 103 (1979).

[3] PUSKA, P. ET AL. Changes in coronary risk factors during a comprehensive five-year community programme to control cardiovascular diseases (North Karelia Project). *British medical journal*, **2**: 1173 (1979).

improved from 42 years in 1950 to 55 years in 1975. As life expectancy rises, trends in the cause-of-death ratio show a progressive increase in chronic non-communicable diseases, such as cardiovascular disease and cancer. Using data from 165 populations, Preston[4] calculated the hypothetical gain in life expectancy that would occur as a result of eliminating all infectious diseases. This manoeuvre yielded a "modern" life expectancy, complete with sex— differential— namely, 72—76 years for women and 69—72. 5 years for men. Preston concluded that "the mortality profile of an advanced country is typically present in every population, awaiting only a successful attack on infectious disease before emerging".

Those developing countries where the life expectancy at birth is around 55 years are indeed witnessing a diminishing mortality from infectious diseases, concurrent with an increasing risk of death from cardiovascular causes, and in the countries where the life expectancy is over 60 years CHD has already assumed public health significance.

The evolution of the pattern of disease mortality that has occurred in Singapore, for example, whose development indicators now approach those of an industrial country, holds important lessons for other developing countries. In 1948 the life expectancy at birth in Singapore was less than 50 years and the leading causes of death were tuberculosis and other infectious diseases. Today, that country has achieved a life expectancy of 71 years and cardiovascular diseases are the leading cause of death. These changes reflect more than just the changing age structure of the population. The standardized death rate from CHD has more than doubled in the past 20 years, rising from 22 per 100 000 population in 1957 to 50 per 100 000 in 1979,[5] and this upward trend is continuing. Similar trends have been documented in other developing countries, such as Malaysia, Mauritius, and Sri Lanka, and are also occurring in many countries in Latin America and the Caribbean.

The indications are that by the year 2000 the life expectancy at birth will reach 65—70 years in developing countries, with 70% of the population in these countries expected to attain the age of 65. Furthermore, if current rates of urbanization continue, the proportion of people living in urban areas in developing countries will increase from 27% in 1950 to 41% by the year 2000. With the great increase in the number of older people and the psychosocial, cultural, and life-style changes that tend to accompany urbanization, many of these countries are likely to face a sharp increase in chronic noncommunicable diseases at a time when infectious diseases are still not wholly under control.

Strategy for prevention: a population approach

In developing countries, the life-style pattern that is associated with high rates of CHD is not yet widespread and the average level of critical risk factors in the community at large is still favourable. Therefore, a logical approach would be to prevent the emergence or entrenchment of unhealthy lifestyles in the community and to retain the health-promoting aspects of the traditional way of life. This fundamental approach to the prevention of CHD in low-incidence populations is known as *primodial prevention;* its main object is to avoid those social, economic, and cultural patterns of life that have been shown to contribute to the high incidence of CHD in "developed" industrial populations.

Another approach, termed *primary prevention,* is to reduce or modify the risk factors that are already present in both individuals and the community and thus forestall the development of overt disease.

In practice, because there is no country that is entirely free of risk factors, the two approaches must be seen as complementary and reciprocally related.

Primordial prevention requires action at two levels:

(*a*) at the national level, to arouse political and public awareness of the problem of cardiovascular disease and to formulate and implement long-term national health policies backed, where necessary, by legislative action;

(*b*) at the technical and scientific level, to monitor risk factor trends in the population (see box), identify the factors associated with their spread in the community, and test population-based methods of prevention; this requires epidemiological and psychosocial investigations, as well as actual intervention trials.

In operational terms, the long-term national health policies will need to be supported by specific programmes in four key areas:[6]

— nutrition and eating patterns, so as to provide the agricultural sector, the food industry, and those

[4] PRESTON, S. H. *Mortality Patterns in national populations—with special reference to recorded causes of death.* New-York, Academic Press, 1976, pp. 58-59 and Table 3.2.

[5] CHEN, Ai-Ju. Recent trends in the mortality and morbidity of cardiovascular diseases. *Annals of the Academy of Medicine (Singapore),* **9** (4): 411—415 (1980).

[6] WHO Technical Report Series, No. 678, 1982 (*Prevention of coronary heart disease.* report of a WHO Expert Committee), PP. 40—41.

responsible for food imports with guidelines to ensure a healthy diet for the different age groups of the population;

— smoking control and related national strategies in respect of agriculture, tobacco imports, and health education;

— prevention and control of hypertension; and

— promotion of physical activity and the avoidance of obesity.

Preventive efforts against CHD should be seen as part of a more general programme against non-communicable diseases. The control of CHD risk factors could lead at the same time to the reduction of respiratory disease, some cancers, diabetes, and stroke. Policy-makers should see this as an argument reinforcing the case for national policy, planning, and commitment to efforts against CHD.

Although the countries with the lowest incidence of CHD are, theoretically, the most appropriate for primordial prevention, in practice other factors intervene. Usually, the life expectancy at birth in these countries is less than 50 years, the infant mortality rate is over 100 per 1000 live births, and the per capita GNP is less than US $ 500. In these circumstances of many pressing health problems and little money to cope with them, realistic strategies for primordial prevention of CHD are likely to be restricted, for the time being, to the control of cigarette smoking in the community and to measures directed at young people.

Smoking control

Cigarette smoking is clearly the single most important area for immediate action. In terms of primordial prevention this implies efforts to prevent people, especially the young, from taking up the habit, so as to achieve the ideal goal of raising a generation of non-smokers brought up to consider smoking as a socially unacceptable form of behaviour.

Methods of controlling the smoking epidemic, many of them inexpensive, have been suggested by a WHO expert committee[7] whose recommendations include the following.

Recommendations addressed to all countries

— Non-smoking should be regarded as the normal social behaviour and all action which can promote the development of this attitude should be taken.

— There should be a total prohibition of all forms of tobacco promotion.

— Promotion of the export of tobacco and tobacco products should be discouraged. Tobacco-growing and manufacturing industries. should be progressively reduced in size as rapidly as possible.

— Governments should recognize the serious dangers for smokers in certain industrial occupations and develop special programmes to eradicate smoking from these industries, introducing legislation where necessary. The synergism observed between smoking and

Tracking cardiovascular disease trends through "Monica"

For the sake of all countries, developed and developing, it is vital to track the changing incidence of cardiovascular diseases and pinpoint the physiological, dietary, and other factors associated with these changes. Routine health statistics cannot meet this information need fully. To come up with the facts needed, a multinational study is being coordinated by WHO to *monitor* cardiovascular disease trends and determinants (hence its name, the Monica project). The project has started in 36 centres in 24 countries, each centre covering a population of around 300 000, and is expected to run for a decade. The centres will measure the incidence of cardiovascular diseases—particularly coronary heart disease and cerebrovascular diseases—and assess the extent to which these trends are related to changes in known risk factors (smoking, blood lipids, blood pressure, diet), daily living habits, health care, and major socio-economic factors in the study population. It is expected that the Monica project, besides answerring these questions, will introduce in the countries concerned new health statistical methods will lead to more effective use of national health information systems.

Further details are contained in the Monica project protocol (unpublished document WHO/MNC/82. 1, Rev. 1) available from Cardiovascular Diseases, World Health Organization, 1211 Geneva 27, Switzerland.

[7] WHO Technical Report Series, No. 636, 1979 (*Controlling the smoking epidemic*: report of the WHO Expert Committee on Smoking Control), PP. 72—73. These recommendations were endorsed and supplemented by the WHO Expert Committee on Smoking Control Strategies in Developing Countries, whose report was published as WHO Technical Report. Series, No. 695, 1983, and summarized in *WHO Chronicle*, 37 (3) 86—90 (1983).

certain occupations implies the need for careful monitoring in industries where toxic inhalation is a problem and indicates the need for research in this area.

— Upper limits should be established for appropriate emission products of cigarettes. These limits (currently for tar, nicotine, and carbon monoxide) should be progressively lowered as rapidly as possible. Every tobacco packet should contain a health warning and information on emission levels.

Recommendations addressed to developed countries

— Exports of tobacco containing higher levels of toxic substances than those marketed under the same brand designation in the country of origin should cease immediately.

— All packaged tobacco that is exported should carry the health warnings and emission levels required in the country of origin printed in such a way as to be intelligible to the recipients.

Recommendations addressed to developing countries

— Countries that have a recognizable smoking problem should attempt to control it by the means elaborated in this report, and countries so far without such a problem should give high priority to policies directed at the prevention of smoking. This implies the development of data collection systems to delineate the problem, the adoption of the necessary legislation, and the use of educational techniques suitable to the socio-cultural situation, particularly those where communication is difficult.

— No country should allow a tobacco-growing or manufacturing industry to be developed. Where such an industry exists, priority should be given to the development of substitute crops, with international cooperation.

Prevention in youth

To be effective, measures for the prevention of CHD must begin in youth because of the proven early onset of the underlying atherosclerotic process and of the behavioural patterns conducive to the major CHD risk factors. In many countries the first cigarette smoking experience, potentially leading to the establishment of the habit, starts in children aged 6 to 11 years. Nutritional habits favouring elevated blood cholesterol level's and obesity are also acquired early in life. Another reason for concentrating on the youth of a country is that children may help as agents for change in the total community picture.

In principle, efforts ought to be directed at all young people, including those outside the formal school system whose problems might require additional study and special approaches. In practice, though, activities will have to rely mainly on the school health education programme and will involve the following steps:

- analysis of current health education curricula, especially with respect to requirements for cardiovascular health, e.g., smoking prevention, nutrition, and physical exercise;
- devising a suitable programme based on clearly defined objectives;
- testing and evaluating the new programme in controlled pilot studies;
- amending the programme, if necessary; and
- operating the tested programme on a nationwide scale.

Eating habits

The general principles underlying recommendations for a helthy diet are the same, whether viewed from the standpoint of undernutrition or from that of overnutrition. The following guidelines, which reflect many of the features of traditional eating patterns, have been recommended.[8]

(1) Emphasize foods offering good-quality protein, low fat, low saturated fat, low cholesterol, low sodium, low refined sugar, high complex carbohydrates, high minerals, vitamins and fibre, and lower energy intake;
   - — appropriately combined foods of plant origin; beans, cereal grains, vegetables (cooked and raw), and fruit;
   - — fish, poultry, and lean meats, used in small portions and eaten less often as the main dish;
   - — low-fat dairy products for adults;
   - — less oils and fats in food preparation and spreads; preference to be given to liquid vegetable oils.

(2) De-emphasize foods high in saturated fat and cholesterol and providing high energy intake;
   - — high-fat meats from domestic breeds as the principle protein source;
   - — high-fat dairy products; whole milk, cream, cheeses;

[8] WHO Technical Report Series, No. 678, 1982, PP. 23—24.

(*Continued on page 212*)

NEW TECHNIQUE TO PREVENT MYOCARDIAL INFARCTION

BELLA LUKYANOVA

ANGINA pectoris is a usual companion of ischaemia which is the most common cardiovascular disease. In its acute phase, angina pectoris can lead to the development of myocardial infarction. Medical researchers of many clinics in the world are working towards the perfection of the treatment of this disease and its prevention. Various specialists are engaged in these studies, among them surgeons who have already suggested over 100 types of cardiovascular operations.

At first sight, the surgeries performed by Professor Georgi Mysh at the First Clinical Hospital in Navosibirsk seem amazingly simple. Under local anaesthetics the surgeon makes a small incision on the patient's breast muscle. After the costal cartilage is removed, the surgeon opens the front part of the pericardium through the opening thus obtained and then detaches it (the heart is protected by a sac, or pericardium), thus creating a kind of pocket in the external cover of the heart, where he puts a pinch of talcum powder. After that a few sutures are applied, and the operation is over.

Within 10 to 12 days, the patients are discharged from the clinic. However, they continue to send their health "reports" to Prof. Mysh for a number of months and, in some cases, even for years. Though the Professor's mail hardly contain's two similar letters (neither has he ever had two patients in an exactly similar emotional and physical condition) each of the letters contain something like: "I feel all right," or "I've returned to my former job."

Children are known to suffer neither from infarctions nor from angina pectoris. One of the reasons is that a child's heart has a different blood supply as compared to an adult one. Blood is supplied to the child's cardiac muscle (myocardium) not only through the major coronary vessels but also through many minor capillaries which link it with the heart sac (pericardium). As the organism develops, the coronary blood vessels grow in importance, and many capillaries dry out because the body does not need them any more. The thing is that the major blood vessels, which let through a great amount of blood, enable the body to endure a significant strain and do hard physical work. Such a type of blood supply is more sensible, but only when the organism is working intensely.

Unfortunately, as we grow older, we profer to sit most of the time. Besides, the very kind of work common now spares a great physical effort to the majority of people. As time goes, the walls of the coronary blood vessels become less elastic and develop cholesterol plaques blocking the blood passage. When under strain, the heart fails to perform its function as before, as the major vessels' capacity drops and the minor ones, for lack of practice, have lost their activity.

The surgeons have suggested many techniques for bringing the blood circulation back to normal, includ-

ing surgical ones. Among them are the implantation of by-passes round constructed vessels, the replacement of the latter clearing from the sclerotic plaques, etc. Naturally, such operations are quite complicated: they are performed under general anaesthetics and often require a number of special devices, such as heart and lung machines.

Theoretical studies and analyses of observations made by doctors in the past, as well as experiments on hundreds of animals convinced Georgi Mysh that it is quite possible to help the heart by activating the capillaries. During the operation, the Professor inflicts an artificial burn in the pericardium and then, by introducing talcum powder into it, provokes an aceptic (germless) inflammation.

The external picture of such an inflammation is familiar to everyone. Its first sign is the reddening caused by the dilatation of the blood vessels and an abundant blood influx. The operation performed after Prof. Mysh's technique causes the dilatation of numerous minor vessels supplying a large amount of blood to the pericardium and the cardiac muscle. (It is interesting that early this century a distinguished St. Petersburg physician, V. Kernig, described cases when patients who had suffered a bad attack of angina pectoris complicated with the pericardial inflammation would suffer no more for a long time). But what is going to happen next? Will the pinch of talcum powder go on working like a permanent inflammation generator, or will the body adapt to the situation and the inflammation will cease making the vessels passive once again?

Time has answered these questions: the overwhelming majority of Prof. Mysh's patients who have undergone such a surgery find it easier to live and work. Even several years after the operation, they are still aware of its effect.

—SOVIET FEATURES

(*Continued from page 210*)

- whole eggs (unless a major source of protein);
- commercially baked products;
- alcoholic beverages.

Hypertension

High blood pressure makes a significant contribution to CHD and is an important predisposing cause of stroke and renal failure. A reduction in the incidence of these conditions requires the primary prevention of elevated blood pressure by weight control and reduction of salt intake.

Weight control. In many developing countries obesity is not yet a widespread phenomenon and efforts to prevent it from becoming so must be linked with the objectives for establishing healthy eating patterns and for promoting physical activity. The long-term strategy must be promote appropriate eating habits and to provide city dwellers with opportunities for greater physical activity and recreation.

Salt intake. Strong correlations are observed between hypertension and salt intake: average population diastolic pressure appears to increase by 0.8 mmHg (0.1 kPa) per gram of habitual salt intake.[1] There is also epidemiological evidence that communities that eat small amounts of sodium and relatively large amounts of potassium have a low prevalence of hypertension.[2] Since hypertension is relatively infrequent when the average daily salt intake is below 5 grams, it is recommended that the consumption of salt should not exceed this amount[3]. At the same time, increasing the daily intake of fresh fruit and vegetables is a natural way of enhancing the intake of potassium and other important nutrients.

There is no easy solution to the problem of CHD, and primordial prevention in developing countries will undoubtedly encounter difficulties, particularly where CHD is not considered of public health importance or where political attitudes tend to favour policies that promise short-term direct economic gains rather than those required to support long-term investments for health. In spite of such difficulties, many developing countries now have the opportunity to prevent or halt the spread of CHD. It is an opportunity not to be missed.

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[3] WHO Technical Report Series, No. 678, 1982, P. 26.

Courtesy: WHO Chronicle Vol. 38, No. 1 1984

WOMEN'S EDUCATION

A CORNER-STONE TO ATTAIN HEALTH FOR ALL

DR (SMT.) RADHA ARAS

HEALTH for all by the year 2000 does not mean a world in which there will be no sick or disabled. It means a world in which people will not only have access to basic health care, but also be better equipped to prevent illness at home, at school, at the place of work and will be aware of their ability to shape a world free from avoidable or man-made diseases.

For almost all children, the most important primary health care worker is the mother. If she is an educated mother, then she will have a better idea of child care, nutrition, cleanliness, and a better awarness of the factors which affect the health of her family.

One of the basic improvements required in the lives of women, which have been shown to have a direct influence on infant mortality rates and healthy growth of children, is women's education to increase women's access to vital information. For it is usually the mother's level of education and access to information which will decide whether or not she will go for a tetanus shot when she is pregnant; whether a trained person will be present at birth, whether she knows about the advantages of breastfeeding; whether her child will be weaned at the right time; whether the best available foods will be cooked in the best possible way; whether water will be boiled and hands washed; whether bouts of diarrhoea will be treated by administering food and fluids; whether a child will be weighed and vaccinated; and whether there will be an adequate interval between births.

The level of education and attainment of good health have very positive corelationship. Female literacy rate particularly is an important determinant both for utilization and for providing medical, health and social welfare services. A very good illustration of this truth is found in Kerala. The State of Kerala has the highest female literacy rate of 64.5 per cent and lowest infant mortality rate of 56 in the country. The State also has a very good status in the filed of health, family planning, cleanliness and environmental sanitation. In an Indian study, children born to illiterate mothers had a mortality rate of 132 in rural areas and 81 in urban areas but in the case of literate mothers it fell to 90 and 53 respectively.

For almost all children, the most important primary health worker is the mother. Therefore, women's education to increase their access to vital information is one of the basic improvements required in the lives of women.

There is still a resistance to the idea of female education in our country. Records of the total enrolment in the education system at all levels show that for every 100 boys only 54 girls are enrolled. There is a widening gap between male and female literacy over the years. In 1981, literacy rates in India were 46.6 for males and 24.8 for females. In the rural areas the female literacy rate is only 17.9 per cent.

The importance of female literacy is also proved in the field of family planning by various studies. The national survey has indicated that the number of children born alive to couples decline from 4.03 in case of illiterate husbands to 2.16 in case of husbands educated upto the intermediate level and above. But it declines from 3.8 in case of illiterate females to 1.6 in case of wives who were intermediate and above.

'Free' education is expensive when parents are too poor to easily afford books, clothes, shoes, etc. For girls who are often wanted to help with household tasks and child care and for whom education is often not considered to be so necessary, this expense may prove to be too much. But the dividend that this investment will pay in the long run has to be understood by all parents. They have to understand that education is not meant for career training only. Investing in a minimum of four years of school for her is one of the most cost effective investments which any parent can make for the future. Because any mother who is literate has more opportunity to learn about new ideas and more confidence to put them into practice.

ANGANWADI

Do they think this is just a kitchen ?

OMPATI, a 23-year-old wife of a perous farmer in northern India, believed so strongly in the new child care programme offered by the government that she went against the wishes of her husband's family to volunteer as a child care worker so that the programme could come to her village.

Dhandhlan is a relatively large farming village of almost 4000 people in the north Indian state of Haryana. A sizeable number of its people are Harijans, the lowest group in the Hindu social structure. Most are poor and work as farm labourers.

A few years ago the Government of India introduced an Integrated Child Development Services (ICDS) scheme to aid poor communities in rural areas, tribal districts and urban slums. The ICDS scheme was designed as a flexible community-based programme bringing a variety of health services to the people through the *anganwadi* or "child care courtyard".

When Ompati returned from her four-month training course as an *anganwadi* worker, eager to start work, she learned that the *anganwadi* built in the Harijan section of the village had no one to run it because no Harijan woman had enough education to qualify for the job. Bravely stepping over an old caste barrier, Ompati agreed to work there.

She began by visiting every home to record the vital statistics of each family. Of the 842 people in Dhandhlan, 159 were children of six-years-old or younger. Miscarriages were frequent, infant mortality was high.

Although she explained that one of the main purposes of the *anganwadi* was to care for each child's health, many mothers were shy or reluctant to send their youngsters. "Mothers refused to let me weigh their children," Ompati says. "They feared their children would fall sick if I put them on my weighing scales. I had to put my own child on the scale and give endless explanations before I was able to record their children's weight."

After much persuading, there are now about 70 children in her centre. They play with toys Ompati has taught their mothers to sew, and sing health messages in their nursery songs. Some children arrive just in time for the simple mid-day meal. "I get cross with their mothers. Do they think this is just a kitchen? I teach children many useful things besides providing a meal."

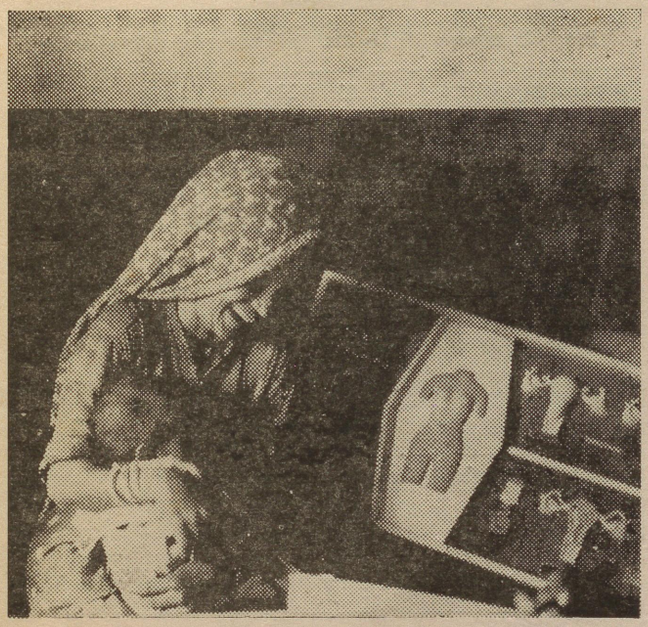
Susheel Varma, the auxiliary nurse/midwife attached to the local primary health centre, visits the four *anganwadis* in Dhandhlan regularly and gives the children their immunizations. If Ompati has time, she goes with Susheel on her visits to families in the neighbourhood.

In the afternoons, women and girls come to the *anganwadi* to talk about health, the importance of personal hygiene and environmental cleanliness, and cooking techniques for better nutrition. About 50 women and girls attend Ompati's functional literacy class. She is very hopeful. "The children in Dhandhlan look much healthier. There are fewer miscarriages, and fewer babies die now. These are changes I have seen with my own eyes."

In 1981 an All India Institute of Medical Sciences survey of ICDS projects around the country found that almost half the children in the communities covered were enrolled in the *anganwadis*. The proportion of severely malnourished children was cut by half. More than 300 communities are presently benefitting from this UNICEF-supported programme; there are plans to extend it to an additional 700 communities by 1984.

—UNICEF Report 1983

A CASE STUDY



WHAT HELPS TO PLAN FAMILY

T. JAYA RAJ

Fertility knowledge is indeed fertility control. Population education is relatively a 'safe' and 'sweet' way to reduce the population growth. The Government must introduce the population education in school and college educational syllabi from fourth standard onwards, says the author.

IN a broader sense family planning is concerned with quality of life. In the context of family health, it is a way of helping families to be healthier and happier. With family planning pregnancies can be spaced.

The main object of the present study was to collect information regarding knowledge, attitude and practice of family planning among the respondents or the spouses in the reproductive age group in the Vilavancode village in Kanyakumari district of Tamil Nadu. The study also analysis the socio-economic status and demographic characteristic of the respondents.

Methodology

The survey was conducted in a randomly selected 100 households—*i.e.*, 14 per cent of the total households in the village. The prescribed schedule was filled in by all the currently married male members residing in the house and having spouses below 45 years of age, or husbands of currently married women, aged below 50. The schedule was designed in such a way as to suit the various socio-economic and demographic characteristics of the respondents, knowledge of population problem, practice of family planning and the knowledge about abortion method. The sample survey was conducted in 1983.

Demographic features

The sample covered 86.0 per cent literates and 14.0 per cent illiterates. Among the 100 respondents, 51 respondents belonged to Hindu religion and the others were Christians.

Occupational levels of the respondents showed that 31 respondents were agricultural labourers and the others belonged to non-agricultural sector category. The survey also revealed that 40 per cent of the respondents earned a monthly income of below Rs. 500, the rest above Rs. 500.

The salient demographic characteristics of the respondents were relatively high fertility and low mortality. Of the 100 respondents 55 had less than three children and others had more than this figure.

The survey revealed that all the respondents were found to have some knowledge of family planning. An analysis of the replies showed that all of them had the knowledge of the following three family planning methods: (i) Nirodh, (ii) Vasectomy, and (iii) Tubectomy. Only a few respondents had the knowledge of other family planning methods.

Desire for children

The desire for children on the part of the parents or would be parents is one of the important factors influencing the fertility of a population. Any change in desire for children is bound to affect the actual level of fertility. It is, therefore, important to find out the attitude of people towards family limitation.

The following tables clearly indicate the attitudes of the respondents towards family planning as influenced by religion, economic status, occupation, education and number of living children.

TABLE I

Religion and family planning attitude

Religion	No. of Respondents	In favour	Not in favour
Hindu	51	43 (83.31)	8 (15.69)
Christian	49	40 (82.04)	9 (17.96)

Figures in parenthesis show percentage.

TABLE II

Economic Status and attitudes towards family planning

Monthly Income	No. of respondents	In favour	Not in favour
Less than Rs. 500	40	32 (80)	8 (20)
Rs. 500—750	24	19 (77.80)	5 (22.14)
Rs. 750—1000	16	14 (87.5)	2 (12.5)
Above Rs. 1000	20	18 (90)	2 (10)

Figures in parenthesis show percentage.

TABLE III

Educational level and attitude towards family planning

Education of the Respondents	No. of respondents	In favour	Not in favour
Illiterate	14	9 (64.28)	5
Literate (able to read and write)	13	9 (69.23)	4
5 years of Schooling	17	15 (88.24)	2
5—8 years of Schooling	10	8 (80)	2
SSLA level	28	25 (89.28)	3
PUC level	3	3 (100)	0
Graduate and P.G.	15	14 (93.33)	1

Figures in parenthesis show percentage.

TABLE IV

Respondents occupation and attitude towards family planning

Occupation of the Respondent	Total No. of respondents	In favour	Not in favour
Agricultural labourers	31	24 (77.3)	7
Agriculturists	9	6 (66.6)	3
Teaching Staff	8	8 (100)	0
High and middle grade Govt. workers	27	26 (92.7)	1
Low grade Govt. servants	14	11 (78.5)	3
Businessmen	3	2 (66.6)	1
Others	8	6 (75)	2

Figures in parenthesis show percentage.

TABLE V

Number of living children and attitude towards family planning

No. of living children	No. of respondents	In favour	Not in favour
0	4	3 (75)	1 (25)
1	5	4 (80)	1 (20)
2	21	21 (100)	—0—
3	25	22 (88)	3 (12)
4	12	8 (66.67)	4 (33.33)
Above 5	33	25 (75.55)	8 (24.25)

Figures in parenthesis show percentage.

From the Table I to V it is evident that among the 100 respondents 83 respondents desired small family and also approved family welfare programme. Increase in age and educational status of respondents are seen to be two factors contributing to the awareness of the family planning.

Practice of family planning

The ultimate objective of family planning in the country is to reduce the birth rate from 39 per 1000 of population in 1970 to 25 by 1984. For this purpose 33 to 45 per cent of the reproductive couples will have to be protected from the risk of conception during the period.

The question of practising family planning methods arises only when the persons know of such methods. Hence the percentages are worked out on the basis of the number of persons who know each method. The following table indicates the measures of family planning methods among the 100 respondents of the Vilavancode village.

TABLE VI

Awareness practice of family planning methods

Sl. No.	Family planning methods	No. of persons knowing F.P. methods	Total No. of persons practising F.P. methods
1	Condom	100	15 (15)
2	I.U.D.	28	—
3	Oral Pills	57	4 (7.02)
4	Foam Tablets	13	—
5	Safe period	34	10 (29.42)
6	Withdrawal	43	—
7	Jelly/cream	8	—
8	Vasectomy	100	—
9	Abstinence	19	3 (15.79)
10	Tubectomy	100	13 (13)
11	Laparoscopy	8	—

Figures in parenthesis show percentage.

From Table VI it is evident that 15 per cent of the respondents were found to be using niroth. It seemed to be the most acceptable method of family planning. Four respondents used oral pills; 10 respondents relied on safe period, three respondents practised abstinence and 13 wives of the respondents had undergone sterilisation (*i.e.* Tubectomy).

An analysis of the replies of the respondents revealed that most of them (73 per cent) had disapproved abortions, 16 per cent had approved and other respondents have no idea about abortion.

Recommendations

It can be said that respondents were generally in favour of family planning and, if properly motivated, all couples who require family planning can be brought under fold.

In the light of my knowledge and the suggestions received from the respondents, I can make the following recommendations for improving the family planning programme.

— Government must introduce the population education in school and college education syllabi from fourth standard onwards.

— 'A satisfied user is the best propagator'. An association of satisfied acceptors of family planning may be formed in each Panchayat to discuss and solve their own problems and to popularise the family welfare programmes among non-acceptors.

— A family planning education officer at district level must be appointed by the Government to propagate the message. For contacting newly married couples their names should be registered in a particular centre. The role of voluntary organisations should be revitalised by extending financial assistance for expanding their scope to include family welfare activities. The active involvement of local religious and political leaders should be ensured.

— Recanalisation facilities should be provided in all major hospitals and the fact must be given wide publicity.

—*Courtesy*: *YOJANA May* 1984.

FERTILITY CONTROL MEASURES

The Indian Council of Medical Research has established a National Programme of Research in Human Reproduction involving various institutions as Collaborating Centres during the last four years. The main approaches of the research being followed are:

(1) Improving the efficacy and acceptability of existing contraceptives;

(2) Studying the efficacy, safety and acceptability of newer/improved methods of contraception;

(3) Studying the psycho-social, cultural and behavioural aspects, including the service delivery for improving acceptance and continuation rates of Family Planning methods; and

(4) Mission-oriented basic research for evolving newer methods of contraception.

Following these broad approaches, a number of research projects have been taken up which are at various stages of progress. The total expenditure incurred by the Indian Council of Medical Research in this connection during the last four years is about Rs. 827 lakhs. This information was given by Smt. Mohsina Kidwai, Minister of State for Health and Family Welfare in Lok Sabha on 22 March, 1984. △

One of the basic tasks of any health programme for curing breast cancer is to educate and convince women that the disease is curable if detected and treated at an early-stage. Self-examination of the breast is advised as an important aid in its early detection, says the eminent surgeon.

EARLY DETECTION HELPS CURE BREAST CANCER

DR LALIT K. SHARMA

CANCER of the breast remains a serious problem to women in India as in the Western world. Any individual woman in her life time stands one in fourteen chance of developing this disease. In the United States breast cancer is the most common form of cancer in woman. Every year approximately 90,000 new cases are diagnosed and about 32,500 women die of breast cancer in the U.S.A. Japan has the lowest incidence of this disease in the world. It is also rare among the Eskimos. In India the incidence, according to a study in Bombay, is approximately 28 per 1,00,000 women population.

Risk factors

Three separate lines of evidence serve to support the importance of dietary factors. First is derived from an animal experimental study, which demonstrates that the feeding of high fat diets substantially increases the incidence of mammary cancer in rates.

Second comes from population correlation studies which demonstrate that correlation persists between breast cancer incidence and total dietary fat intake. The third line of evidence relates to breast cancer occurring in women with over-nutrition.

Advancing age: Patient's age has a very important relationship to the likelihood of her having breast cancer. Below the age of 25 the disease is rare accounting only for about 0.2 per cent. Maximum incidence of breast cancer is between the age of 40 to 54 years, though the disease is seen in older women also.

Family history: Numerous careful studies of the prevalence of breast cancer in families leave no doubt that it is inherited. A lady with any first degree relative with breast cancer is herself in greater risk than a woman with no family history of cancer.

It has been demonstrated that when a woman has cancer of the right breast her daughters and sisters are predisposed not only to develop the disease but to develop it in the right rather than in the left breast.

Productive factors

While the age of puberty has been declining, the incidence of breast cancer has been rising. In the Western world the age of puberty is about 13 years now, earlier it was around 16. Early menarche is shown to be associated with increased risk for breast cancer. Risk of breast cancer is lower among women with late menarche.

However, there is greater agreement about relationship between the age of menopause and breast cancer than its relationship with the age of puberty. There is a consistent trend for patients with breast cancer to have somewhat late menopause.

Parity: In an unmarried women population, incidence of breast cancer is about 1.5 times greater than the general population. Married women between the age of 30—65 consistently have a lower death rate from breast cancer than single women. Incidence of breast cancer seems to be higher in women who do not have children; thus pregnancy has a protective effect on breast cancer.

Age of first birth: The risk of cancer of the breast increases with advancing age at first birth. Relative risk is much lower in women who had their first child under the age of 20 than for those whose first child was born at the age of 35 or later.

Breastfeeding: Today we are abruptly abandoning the practice of breastfeeding. It would be strange if this abrupt and drastic change in breast function did not have some repercussion in terms of breast diseases, particularly cancer.

Incidence of breast cancer is higher in married women who do not breast-feed their children. Among the women who breast-fed their children for a shorter period the incidence of cancer of the breast was higher than in women who nursed their children for longer duration. It may be noted here that the period of lactation and breastfeeding is much longer among the Japanese and Eskimo women.

Viral factor: It has been known that breast cancer in mice is related to viral factor transmitted in mice. Similar particles have been discovered in human milk with same morphologic characteristics which are found to be associated with breast cancer in mice. The milk of 39 per cent of Parsi women in India has also been found to contain these particles.

Symptoms and signs

The most common initial evidence of breast cancer is a lump in the breast, unusually painless and frequently discovered by accident. Nipple soreness, discharge from the nipple usually blood-stained, retraction of the nipple may also be the complaints of the patient with breast cancer. Less common presentations include breast enlargement, ulceration of the breast, auxillary mass and puckering of the skin over the breast. Tumour generally becomes palpable at 1-2 cms. size.

Breast cancer is most commonly found in the upper outer quadrant of the breast as a hard, painless, mobile lump. There may be no other findings on examination. However, at the time of presentation if the patient is in state of an advanced disease the lump would be fixed to the surrounding structures, skin may be punctured or ulcerated. A symmetry of the cancerous breast is common, with deviation, flattening or retraction of the nipple. In some cases nipple may be completely destroyed. A mass may be present in the axilla on the same side.

Natural history

A typical cancer of the breast is located in the upper outer quadrant of the breast. It grows slowly and may require five years before it becomes palpable. As the tumour grows in size, it invades the surrounding glandular tissue, underlying muscle and overlying skin. Eventually, tumour cells replace the skin which breaks down to form an ulcer. Thus the tumour increases in size and new areas of skin invasion may occur.

As this progression is continuing, lymphatic and small blood vessels are invaded. The tumour cells pass along the lymphatic vessels to the auxillary nodes, where they implant and grow. Tumour cells keep growing in these nodes and eventually these nodes adhere to one another in large conglomerate mass. With the involvement of the small blood vessels the tumour cells get into the circulation. These cells in the blood circulate through the body, and implants may occur in the lungs, liver, bones and brain. This systemic spread is the rule, and 95 per cent of patients who die of uncontrolled breast

cancer have disseminated disease. Lungs, liver and bones are the commonest sites for these deposits.

Patients today are rarely allowed to go through all these stages of breast cancer without some therapeutic intervention. I feel sad to express that this however is not true in our country. A fair percentage of patients with very advance, disseminated breast cancer, where no treatment efforts can control the disease, are still seen in our hospitals.

Fundamental facts

Breast cancer is usually curable by radical surgery when it is not too advanced. When extension of the disease is present in the auxillary lymph nodes, the cure rate is markedly diminished. With the dissemination of the disease into the other organs of the body e.g. lung, liver and bones, no cure at all is possible.

In detection of breast cancer, both the patient herself and the physician have a role to play. It is a very tragic fact that in our country many women delay for a long before consulting a doctor. The total delay before any meaningful treatment is initiated in such cases may be responsible for patients seeking late advice of the doctor.

Lack of education: Many of our patients assume that since there is no pain in the breast or any other part of the body and they feel quite well in general, there is no need to worry. They often express: "This lump in the breast has not bothered me; so I left it alone".

It is astonishing how very poorly informed the average Indian women are regarding the basic facts of health; not to talk of breast physiology and disease. In our educational system the basic facts of life, health and disease are nowhere taught in the curricula of general education. Therefore, many a time one finds even educated people as ignorant about the disease process as the uneducated ones. It should not be difficult to include in our school or college education a basic course on health sciences.

The fundamental facts about how any cancer develops as a single focus and spreads in the body the importance of early diagnosis and principle of treatment should be widely and extensively published to inform the general public.

Economic factors: Excessive cost of medical care is an important factor in the delay. Majority of our patients are so poor that they can hardly afford a reasonable day-to-day existence, when there is a threat of a disease of a breast cancer, which involve repeated visits to the hospital for investigations and treatment, they often put it off.

Social factor: There is often a tendency among our patients to seek advice from any one who could manage the ailment without proper investigations and operation. Result is that these women with breast cancer fall a prey to "sure cure" clinics. These are neither "clinics", nor the cure is "sure".

However, the so-called clinicians keep nursing such patients of breast cancer with local drug application, injections and oral medicines. When the purse and the patient are exhausted she is forced to seek advice elsewhere. It is rather very very sad that by this time the disease has advanced a great deal.

Psychological factors: There is a whole series of psychological and emotional factors that may delay consulting a physician for breast disease, particularly cancer. These include fear of the disease cancer, operation, incurability and cosmatic deficiency; false modesty and shyness; and depression as a result of the knowledge of the disease, its long term treatment, a friend's narration about her mother's sufferings from breast cancer, etc.

Early detection of breast cancer

Self-examination of the breast: One of the basic tasks of the public or institutional health programme regarding breast cancer is to educate and convince women that the disease is curable if detected and treated at an early stage. Self-examination of the breast is widely advised as an important aid in early detection of breast cancer.

The first step in self-examination of the breast is to inspect the mammary glands before a mirror. Look for any asymmetry lump, change of shape, size of the nipple, its retraction, dimpling of the skin, or any redness. Any blood-stained discharge from the nipple must be consulted immediately.

Second step in *self-examination* is to palpate the breast in lying position either on the bed, couch or floor. Each gland in turn is palpated by the flat

fingers of the opposite hand. Palpation must be gentle, methodical and all area of the breast must be examined. A thickening lump area, or pain on gentle examination should be noticed.

This self examination is recommended twice a year, when women are in late thirties. This is the age at which breast carcinoma first begins. Whenever there is any doubt on self examination of the breast, doctor should be consulted.

Clinical staging.—Clinical staging can be defined as an attempt by the surgeon to identify the extent of the malignant disease based on the physical examination and investigations of the patient.

There are four stages of breast cancer:

Stage 1: The tumour is confined to the breast.

Stage 2: The tumour is confined to the breast but palpable, mobile lymph nods are present in the axilla of the same side.

Stage 3: The tumour extends beyond the breast:

(a) Skin invasion or ulceration of the breast.

(b) Tumour fixed to the underlying muscles, fixed axillary nodes.

Stage 4: Dissemination of the cancer to other organs in the body, e.g. lungs, liver, bone etc.

Management.—(1) Investigations. (2) Treatment.

Investigations.—Blood, Urine, X-ray chest, Biopsy.

Biopsy.—Examination of an abnormal breast tissue or lump under the microscope is the *only* certain way to determine the nature of the lesion or disease. A palpable mass in the breast, regardless of its being painless, mobile, and the length of time it has been present, *must be* considered as the *prime indication* for biopsy. Breast biopsy is a procedure with little risk, and can be done under local or general anaesthesia. The material removed at biopsy must be submitted for microscopic examination. Needle biopsy of breast tumour is done in some institutions and is very satisfactory, if the pathologist is familiar with this type of method and material.

At the All India Institute of Medical Sciences, we have facilities for frozen section biopsy. This is the most satisfactory biopsy method. The tissue is obtained by surgical technique under general anaesthesia. Specimen is processed by special method, slides stained and reported as to the nature of the tumour by a senior pathologist. By this method the report is available to the surgeon in about 20 minutes time while the patient is still under anaesthesia. The surgeon then proceeds to perform the required operation of the breast if the frozen section of the tumour indicates malignancy.

Treatment

There are three aspects of treatment: (a) Surgery, (b) Radio-therapy, and (c) Chemotherapy (Anti-cancer drugs).

Surgical Treatment.—Almost all patients need operation for breast cancer. Breast cancer surgery has been and still is based almost entirely upon anatomic principles. The concept is that tumour remains as a local phenomenon for a particular period of time. After that it spreads to the regional lymph nodes and resides there for another interval prior to systemic dissemination. With this understanding the treatment planning is done.

The choice of surgical procedure ranges from simple excision of the tumour to radical surgical procedure. Operative treatment of breast cancer cannot be fully effective if the disease has spread beyond the area removed by the operation. In the control or cure of breast cancer the operative treatment provides best results in patients who are in an early stage of the disease. Operative mortality is very low for various operations performed for breast cancer.

Radiotherapy.—Both pre-operative and post-operative radiotherapy are necessary for effective result. The concept of radiotherapy before operation of the breast is to reduce local recurrence and dissemination at the time of surgery in larger ulcerated tumours of border line operability. The goal of post-operative radiotherapy is primarily to eradicate the local disease completely.

Chemotherapy.—The use of chemotherapy (anti-cancer drug treatment) as an adjunct to breast cancer treatment represents today as one of the most exciting new aspects of cancer care. This method has developed rapidly in the last two decades. Drugs are administered at regular intervals after the operative treatment. Drugs and treatment period differ in individual cases. Usually, it is six months to one year. Patients with initial advance disease benefit with this

method of management of breast cancer. Drugs and advice to take such treatment is available at the institute. These drugs are given after operative treatment.

Follow up

This is a must for all cancer patients particularly suffering from breast cancer. Regular periodic check-up, investigations and treatment, if advised, are absolutely necessary for the total long term management of breast cancer patients. At the AIIMS, we have managed 486 cases of breast cancer in a single surgical unit. Commonest symptom and sign have been a hard painless lump in the breast.

Less than one-fourth of these cases presented in Stage-I of the disease i.e. when the tumour is confined to the breast. All these patients were operated upon. There was no post-operative mortality. Maximum benefit from treatment and survival has been in Stage-I patients.

Now for the last three years, after operation chemotherapy has been instituted to all patients with advance disease. Our patients tolerate these drugs very well with minimal side effects. Patients' own performance and disease control have been good in the patients with advance breast cancer. Laboratory studies include Estrogen receptors, circulating immune complexes, tumour cell cultures and drugs sensitivity plus electron microscopic studies in breast cancer.

Co-relation has been observed between high levels of circulating immune complexes in the blood and the disease status, particularly in advance or recurrent disease. Breast cancer cells from the operated patients have been cultured and drug sensitivity studies initiated. Results are encouraging. These studies are being done in collaboration with the departments of Pathology, Microbiology and Biophysics.

The studies are being done to understand the behaviour pattern of breast cancer and help in outlining treatment to improve the quality and longevity of life of patients suffering from this disease.

As far as the standard of diagnosis and treatment of breast cancer are concerned, the facilities available at AIIMS are comparable to any standard centre in the world.

(Based on a public lecture at All India Institute of Medical Sciences, New Delhi.)

CANCER IS A THIRD WORLD PROBLEM TOO

CONTRARY to common belief associating cancer with an industrial and urban style of life, cancer is a Third World problem too.

* Throughout the world 1 in 10 adults dies of some form of cancer.

* The annual number of deaths from cancer in the world is about 4.3 million, of which 2.3 million occur in the developing regions, and the remaining 2 million in the developed regions.

* After the first five years of life, cancer, along with cardiovascular diseases and accidents is one of the three main causes of death worldwide.

* It has recently been estimated that the annual number of new cancer cases is about 5.9 million, of which 2.9 million occur in the more developed countries, and slightly more than 3 million in the developing countries, according to statistics published recently in the Weekly Epidemiological Record of the World Health Organization.

The cancers that chiefly affect the developing world are those of the cervix, with an annual 460,000 new cases globally; mouth, 340,000; oesophagus, 300,000 and liver 260,000. And, the experts say, lung cancer will become an epidemic in the Third World unless the current increases in the consumption of cigarettes are slowed or reversed.

To respond to the needs of sufferers, WHO is underscoring measures to prevent, detect and cure the forms of cancer that are prevalent in the Third World, as well as to offer pain relief for the incurably ill.

In prevention and early detection, a key role is being recommended for the primary health workers—in campaigns, for instance, against lung and mouth cancer, by discouraging smoking and betel nut chewing

—HFA 2000, March, April, 1984.

SUCCESS STORY

MOTHER TURNS LAKHIER AFTER LAPAROSCOPIC STERILIZATION

G. VENKATARAMAN

FORTUNE smiled on Smt. Easwari, a landless agricultural labour woman, living in MANKOTTAIPALAYAM, an hamlet two kilometres away from TIRUCHENCODE taluk in Salem District of Tamil Nadu. Easwari, aged 31 years, is the most envied woman in her village since she became lakhier over night through a lottery ticket she received as an incentive for adopting small family norm through laparoscopic sterilisation.

Easwari was one among the batch of mothers numbering 611 who were given five Tamil Nadu lottery tickets —as a latest incentive to motivate eligible mothers to accept terminal method of family planning.

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STORY

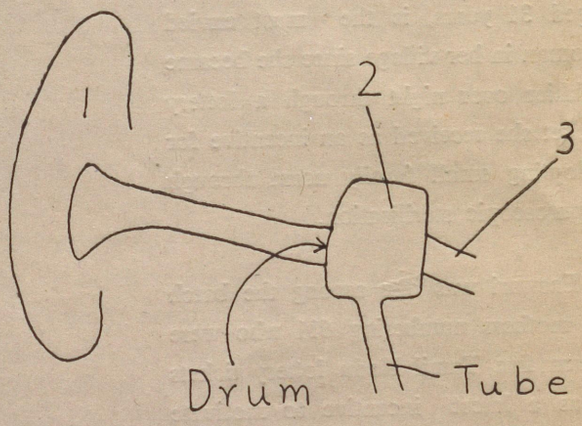
WHY SAVITA DID NOT SWIM

DR R. L. BIJLANI

KAVITA was a good girl. She was kind and helpful. She ate wisely and brushed her teeth regularly. Her best friend was Savita. Savita was also kind and helpful. Kavita and Savita went to the same school. They played the same games. They were always seen together except at one place. That place was the swimming pool. It was so because Savita was never seen at the swimming pool. Whenever Kavita asked her to go for swimming, Savita always made some excuse or other. Kavita and Savita were such close friends that they always told each other everything. However when it came to swimming, Savita seemed to be hiding something. But, as it always happens with close friends, the secret had to be out one day.

One day Savita did not go to school. On returning from school, Kavita went to her place to find out why. Her mother told Kavita that Savita had gone to the hospital. "Why, auntie?" asked Kavita. Savita had to undergo an operation on her ear, she was told. "Why, auntie?" asked Kavita again, now getting rather worried. She was told that it was to seal a small hole in Savita's ear. Kavita wanted to ask more questions but hesitated to bother auntie any further. She decided to postpone the questions till she met Savita. She would visit Savita in the hospital and ask her all about it, she thought.

Kavita went to the hospital as soon as her mother could find time to take her along. They took some flowers for Savita. They reached the hospital while there was still an hour left for the visiting hours to be over. As soon as they reached Savita's bed, she exclaimed "what lovely flowers!" After all, they had taken just the flowers that Savita loved most. Kavita asked Savita how she got a hole in her ear. Savita told her a long and painful story and let us hear it in her own words. "It all started when I was three. I developed this terrible habit of breathing through the mouth. I found it so much easier than breathing through the nose. I started getting a sore throat all too often. It was all because of mouth breathing the doctor told me. Your nose is sticky and hairy inside. While your mouth is not. Therefore, the nose is able to stop the germs from getting into your body while the mouth is unable to, he said. He also told me some breathing exercises. Some of them were so funny. I had to put a card in my mouth and jump around like a bunny, you know", and they both giggled. Savita continued. "I was very irregular in exercises. I would do them for a day or two, and then leave them for a month. Naturally, that was no use. I continued to breathe through the mouth and kept getting sore throat. Sometimes, alongwith sore throat, I also got fever and pain in one ear or other. This, the doctor told me, was because our throat is connected with the inside of our ear." At this point, Savita picked up a paper and pencil from her bedside, and made the following picture:



She continued "the ear that we see (1) just carries the sound upto the ear drum. The part inside it, called the middle ear (2) passes on the sound waves to yet another part of the ear, the inner ear (3) that really makes us hear. It is the middle ear that is connected to the throat. When the throat is bad, sometimes the germs travel to the middle ear, and make it pain. One night, when I had one of those terrible ear aches, the ear could not stand it anymore. The filth that had collected in the middle ear burst the ear drum open and forced its way out. I felt relieved of pain, but I was left with a hole in the ear drum. Now germs could get to my middle ear not only through the throat, but also through the drum. The result was that my ear was almost always sick, with some whitish or yellowish water coming out of it. That was why I could not go swimming with you. If I swam,

(*Continued on facing page*)

BOOKS

Outlook for Tuberculosis Control 2000 AD. Rao, K. N. Indian Journal of Tuberculosis 1984 Apr; 31(2):47-52.

Tuberculosis is one of the leading health problems in South East Asia today, which has over ten million estimated cases of which four millions are sputum positive. Not only a large volume of new highly infectious cases appear each year but equal number of non-infectious cases of tuberculosis, particularly in children also occur. Efficient means of preventions, case-finding and complete cure are available but the dilema is that financial, organizational and the human factors constitute obstacles to the full application of available knowledge. As recommended by the WHO/IUAT study Group in 1981, emphasis be laid on socio-economic measures in addition to BCG vaccination for children, case finding and chemotherapy, etc. and integration of tuberculosis control measures in the Primary Health Care. Using average per capita GNP and PQLI (Physical Quality of Life Index), a comparison is made among developing and developed nations. China's example of committment to improve the quality of life of the people is cited. The Tuberculosis Control Programme will be affected by the population explosion, food scarcity and environmental pollution just as by poverty, ignorance and war. Non-specific measures in these areas are vital for the conquest of tuberculosis in developing countries.

Preventive Health Care for Mothers and Children : A study in Mozambique. Jelley, D and Madeley, RJ. Journal of Tropical Medicine and Hygiene 1983 Dec; 86(6) : 229-336.

This study seeks to evaluate the delivery of preventive mother and child health services in Maputo, Mozambique, Mozambique has given priority to primary health care in the development of its new National Health Service, with a principal focus on maternal and child health (MCH). Three health centres were selected, from areas of contrasting urban ecology. Prenatal and under-fives clinics were observed at each health centre. It was found that at a technical level the preventive services were operating efficiently, with a coverage of over two-thirds of the target population. However, frequency of attendance at both the clinics was much lower in the poorer areas of the city. Additionally, it was observed that women and children identified as having a high risk status were rarely given more care and support. Nurses and midwives, frequently adopted an attitude more punitive than supportive to those most at risk. Notwithstanding these shortcomings, it is clear that significant advances in preventive MCH care are being achieved in a country where 6 years previously the only available health services were curative, and confined to the better-off urban districts.

—*Courtesy:* National Medical Library, New Delhi.
(Highlights from Current Health Literature, Vol. III, No. 9.)

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(*Continued from page 224*)

water would get in through the hole and mess up my already ruined middle ear." Now Kavita knew why Savita didn't hear very well. Sometimes she wouldn't hear the question properly, and would give funny answers that made the class laugh.

Kavita asked, "After the operation, when the doctor has repaired the hole in you ear, will you be able to swim?" "Yes, of course!" said Savita, and you had to see their faces to know how very pleased they both were. △

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INFORMATION FOR CONTRIBUTORS

Swasth Hind is the official organ of the Union Ministry of Health and Family Welfare. Opinions expressed by the contributors are not necessarily those of the Government of India.

Articles on every aspect of public health are invited. They should be such as have not been published or accepted for publication elsewhere.

The articles should be written in simple and non-technical language so as to be understood by the laymen.

Articles should not exceed 1,500 words in length.

The name, designation and all relevent details about the author should be clearly indicated in the beginning of the article itself.

Manuscripts should be typed on the side of the paper, double space and sent *in duplicate*

Good illustrations enhance the value of the articles and contributors are requested to submit photographs, drawings, charts, etc

Photographs should be in black and white on glossy paper, easily reproducible and of 6 × 8 inches in size.

All photographs, charts, etc., should bear captions clearly on the back.

Lettering on charts, tables, etc., should be in black ink (Indian ink) and should be large enough to be read when reduced. Good quality of white paper should be used.

While sending photographs, drawings, etc., contributors should take care to see that they are not damaged in transit. They should be placed between hard card boards and never pinned to anything.

Each contributor whose article is published receives one complimentary copy of the issue and 25 reprints of his article.