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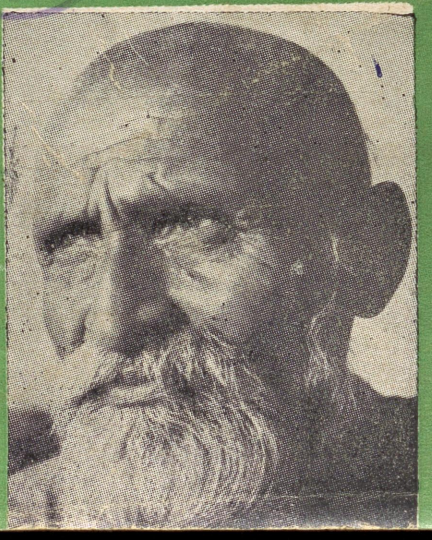
HEALTH IN 70s



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In this issue

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Articles on health topics are invited for publication in this journal. State Health Directorates are requested to send in reports of their activities for publication.

The opinions expressed by the contributors are not necessarily those of the Government of India.

HEALTH IN 70s

Master Plan for the provision of health, medical and family planning services in rural areas ushers in a new era in the development of health services in India. The need of the day is to rectify the imbalance that exists in the distribution of medical facilities between the urban and the rural areas. Planning and re-adjustment of health programmes in pursuance of the Master Plan will go a long way towards meeting the needs of the community, particularly of the rural folks.

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BETTER HEALTH FOR COMMON MAN

The extension of health and medical services to all the people is of primary importance in a Nation's march towards prosperity. The overall objective of our planning has been to raise the standard of living of the people, particularly the vast masses, living in rural areas.

B. S. MURTHY
MINISTER OF STATE FOR
HEALTH AND FAMILY PLANNING

THE most valid criticism of the pre-Independence health programmes in India was the appalling neglect of the poorer sections of population in general and the rural sector in particular. This glaring inequality was sought to be removed in post-Independence India by accepting the principle that no individual should fail to secure adequate medical care because of his inability to pay for it. For the first time the vast masses in the rural areas were assured of proper medical relief and preventive health care as close as sposible to the people in order to ensure maximum benefit to the communities to be served. This stupendous task could be accomplished only by turning out adequate number of doctors, nurses and paramedical staff and providing the necessary infra-structure.

Health Services for Rural People

Despite the magnitude of the problem and limitations of resources we have been able to set up 5,015 Primary Health Centres since 1952, when the scheme was first evolved. This impressive number

has, however, touched only the fringe of problem. A recent study has revealed that there are some 2,200 areas where population of over a lakh of persons are without hospital facilities within a reasonable distance. The Government have now drawn up a Master Plan (*Please see page 72*) to cover each of these areas with a 25-bed hospitals within the Fourth Five Year Plan period. Each hospital will have medical, surgical and gynaecological experts. This is expected to correct the lingering imbalance and benefit the 80 per cent of our rural population who contribute more than 70 per cent to our gross national production.

Mobile Hospitals

As provision of the hospitals is likely to take a little time, the Government launched the scheme of mobile hospitals. These hospitals are being attached to each of the 96 medical colleges. Seven such hospitals are already on wheels and the rest are in different stages of being assembled.

Significant Developments

As one looks back to the post-Independence achievements in the medical and health fields, one can easily locate significant developments in many directions. As against 6,669 hospitals and dispensaries in 1947, their number has shot up to 14,580 and the bed strength raised to 2,63,380 from a meagre 80,163. The picture would not have so radically changed without the augmentation of medical education and training facilities. We have built up a respectable total of 1,05,000 doctors; 66,000 nurses; 52,000 midwives and 6,000 public health visitors. From 25 medical colleges with very limited intake of 2,000 students, there are now 95 medical colleges representing a four-fold increase. The number of admissions has gone up by about six times and today it stands at 11,800.

Mortality Rate Goes Down

Another outstanding achievement is the phenomenal decline in the death rate and the rise in the expectancy of life. This has been due to an intensification of planned health measures during the post-Independence period. Major killers like malaria, tuberculosis, smallpox, cholera and plague have been brought fully under control. The death rate has been pushed down to 14 per thousand from 26.6 in 1947. The infant mortality has also shown considerable decline from 145 per thousand in 1947 to the present 113. Instead of the hovering fear of pre-mature deaths at the average age of 32.09 years in 1947, one can now hope to live upto the average of 52.

Family Planning : A Socia. Revolution

One of the disturbing features of population growth has been the extremely slow decline in the birth rate. From 39.9 per thousand in the decade 1941—50, the birth rate had crawled upto 41 in Fifties. Today, it has dropped down to 38.6 but it must slump to 25 over a period of ten years to keep the population within manageable limits. This downward trend is directly attributable to the intensification of the family planning programme, particularly after 1965. Upto June 30,1970, 7.9 million sterilizations had been recorded which is more than the aggregate number of sterilizations in all the other countries of the world put together.

The Family Planning Programme has now assumed the dimensions of a social revolution and voluntary effort is designed to bring down the birth rate from 39 per thousand to 25 over a period of ten years.

Safe Water for All

The safe water supply and proper disposal of community wastes, especially in the rural areas, also received special attention. The launching of the National Water Supply and Sanitation Programme in 1954 was a landmark, which apart from ensuring the supply of potable water, took care of the incidence of preventable water-and-filth borne diseases like cholera, typhoid, diarrhoea, dysentery and hookworm. Between 1954 and 1970 as many as 2,657 rural piped water supply schemes and 207 urban water supply and drainage schemes costing Rs 730 million and Rs 2,610 million respectively have been approved for implementation.

These schemes are only illustrative. A lot more is being done to make our health, medical and family welfare planning programmes oriented to the needs of our masses in the rural areas. The new era has indeed begun. □

The year Nineteen Hundred and Sixty-Nine has become a landmark in the history of India for many reasons. The events of the year have set in motion heart-searching on the future of planning. It marks the formulation of the Fourth Five Year Plan after a long gap. The chain of events and the demand for a just allocation of Plan priorities have high-lighted the objective of growth with social justice. There is a determined search for identifying the areas and the people who have fallen far behind the rest in sharing the fruits of earlier Plans for socio-economic development.

March of Health

OVER these eighteen years of planned development, considerable progress had been made in various health programmes. Measures for the eradication of malaria, smallpox and control of tuberculosis have resulted in a marked decline in the incidence of these diseases.

The expectation of life at birth has gone up from 32 years in 1950-51 to 53 in 1968-69. The number of hospital beds increased from 1,13,000 in 1950-51 to 2,55,700 in 1968-69. Since the inception of the Primary Health Centre Programme in 1952, 4,919 PHCs had been established upto 1968-69.

Nevertheless, malaria has been eradicated only from about half of our country; T.B. control centres could not be established in half the number of districts. Smallpox vaccination could not cover about 20 per cent of the population. There were 508 Community Development Blocks without PHCs at the beginning of the Fourth Plan.

Perhaps, due to the historical background and logistic advantages, utilization of funds has been more for developing facilities, in urban areas rather than in the rural areas. Only 20 per cent of hospital beds were established in rural areas where over 80 per cent of the country's population lives. Vast tracts of the country inhabited by millions of people have not received even minimum medical facilities; people have to travel great distances to reach a hospital, located either at district headquarters or large towns for medical aid as the PHCs can only provide elementary medical services. In certain cases, it is common knowledge that a part of the funds intended for health and medical care were diverted by the State Governments to other purposes.

The health programmes for the Fourth Five Year Plan were drawn up keeping in view these shortfalls in the earlier plans. Special emphasis has been laid to make the primary health centre as the base for health services in rural areas,—which would not only take care of the preventive and curative aspects but would also form the focal point for a nation-wide family planning programme. To start with, the PHCs which would be located in areas where the malaria programme had entered the maintenance phase were to be strengthened with Basic Health Service Staff and 100 per cent Central assistance would be available for the differential staff for which a plan outlay of Rs 43.98 crores has been made in the Central Sector. In addition, a plan

India has made significant progress in the control and eradication of communicable diseases and in halting the tide of population growth. Provision has been made for increased facilities for medical education and augmentation of health and medical services. Photo shows mass vaccination of children under the National Smallpox Eradication Programme.

PLAN OUTLAYS FOR HEALTH PROGRAMMES

	Centre	*State*	*Total*	*Percentage to Public Sector outlay.*
	(Rs in crores)			
First Plan ..	20.30	70.00	90.30	3.82
Second Plan ..	15.78	130.22	146.00	3.18
Third Plan ..	25.00	184.50	209.50	2.55
1966-67, 1967-68, 1968-69 ..	27.90	112.20	140.10	2.07

TABLE—A

FOURTH PLAN OUTLAY FOR HEALTH

(Rs in Crores)

Programme	*Total Outlay*	Central Sector			*State Sector*
		Purely Central	*Centrally sponsored*	*Total*	
Medical Education and Research (including Dental)	85.29	23.90	5.00	28.90	56.39
Training Programme	12.93	1.54	0.24	1.78	11.15
Control of Communicable Diseases	127.01	1.72	125.29	127.01	..
Hospitals and Dispensaries	89.29	13.79	0.50	14.29	75.00
Primary Health Centres	76.49	..	43.98	43.98	32.51
Indian Systems of Medicine	15.83	6.33	1.50	7.83	8.00
Other Programmes	28.19	6.21	..	6.21	21.98
TOTAL	435.03	53.49	176.51	230.00	205.03

outlay of about Rs 32 crores has been allocated in the State Sector for the blocks which could not be covered with primary health centres, for the construction of primary health centre buildings and staff quarters which could not be completed and for the staff which could not be appointed in the existing primary health centres. A provision of Rs 89.29 crores has been made in the State Sector for strengthening district, taluka and other hospitals to serve as referral hospitals for the PHCs. There is also a provision for further expansion of medical education and training of para-medical personnel so as to meet the requirements. Funds are also available for further intensification of the campaigns against communicable diseases. An outlay of Rs 435.03 crores (*See Table A*) has been made for various health programmes during the Fourth Plan; this works out to 2.73 per cent of the total public sector outlay.

There is, however, a setback in the number of blocks entering into the malaria maintenance phase. Secondly, the States are still following the old practice of establishing more hospital beds in urban areas than in rural areas. The imbalances and gaps in medical care and basic health facilities in rural areas continue to widen and call for immediate steps to stop the trend.

The Central Government has prepared a Master Plan to bring about a more balanced development of medical facilities. Its implementation involves inevitably certain financial and other adjustments in the health programmes to be undertaken during the remaining period of the Fourth Plan as it is sought to be accommodated within the available outlays in the State and Central Sectors.

There has been a unique unanimity on the need to reorient medical education, the profession and health services so as to meet the demands of the community, particularly in rural areas. Education has to be modified in the medical colleges so as to produce a basic doctor who will be able to deal with the common needs of the community without the assistance of sophisticated equipment and complicated laboratory tests.

Augmenting Manpower For Health Services

THOUGH considerable achievement has been made in providing trained manpower for rendering medical and health services, yet it is not commensurate with the requirements as envisaged first by the Bhore Committee and later by the Mudaliar Committee. The services provided in the rural areas have not developed to the desired extent in spite of the fact that 80 per cent of the population lives in the villages.

Doctors

The number of active doctors, as estimated during 1968, was 1,02,520. It is expected that by the end of the Fourth Five Year Plan, approximately 49,300 new doctors will qualify from the various medical colleges. Considering the allowance to be made due to attrition, the total number of doctors expected to be available by the end of the Fourth Plan period is estimated to be 1,37,930.

There are at present 3,203 primary health centres with only one doctor each and 333 primary health centres have been functioning without any doctor. In addition, 339 new primary health centres are proposed to be established during the Fourth Five Year Plan. If these primary health centres are to be provided with the required number of doctors, there is need for about 4,500 additional doctors.

The shortage of doctors in the rural areas, as it exists, is mainly due to maldistribution of doctors between the rural and urban areas. No systematic study has so far been made on the rural urban distribution of manpower.

However, there is an apparent concentration of doctors in the urban areas which offer professional, social and other amenities for advancement in life. There is distinct resistance to face the difficult conditions of work in villages with the result that the distribution of doctors in the urban and rural sectors is in the reverse proportion to their respective population. This urban-rural maldistribution of doctors has been affecting the services in the rural areas.

To remove the imbalance between the doctors available in rural and urban areas, the Committee constituted by the Central Council of Health studied the problem and suggested that medical education should be geared to prepare the doctors for service to the community. The measures suggested by the Medical Education Committee for encouraging the medical personnel to take up jobs in the rural areas would help in minimizing this imbalance to a great extent. The requirements for correcting the imbalance can be met with from the existing number as

well as from the additions that will be made by eight more medical colleges during the Fourth Five Year Plan.

As a large number of doctors will be coming out of the medical colleges, the chances are that a larger proportion will be available for jobs in the Government departments, particularly in the rural areas, if better facilities in rural areas are ensured. In fact, in States like Mysore and Rajasthan where the number of doctors produced by the medical colleges has increased, it has been possible for the State Government to recruit a large number of doctors to man the jobs in rural areas. In States where the number of doctors produced by medical colleges has been large, there has been less reluctance on their part to go to rural areas and seek Government appointments. West Bengal has been producing a large number of doctors since long and their doctors have even migrated to other States to accept Government jobs. The present shortage can also be met by recruiting doctors from those States where there will be surplus.

In addition, there is a growing number of trained practitioners of Indian Systems of Medicine and Homoeopathy who can be effectively utilized for service in the rural areas.

In so far as the referral centres for the primary health centres are concerned, particularly the district hospital, many district hospitals are already provided with specialists.

It is estimated that on an average, 10 to 11 specialists are needed per district hospital. The requirements of specialists to man district hospitals in the country works out to approximately 4,000. It does not seem difficult to provide specialist services in the referral hospitals, as well as in the upgraded primary health centres to 25-bed rural hospitals, which will also function as referral hospitals.

Nurses

At present, the ratio of nurse to population is 1 : 8,500. By 1974, it may be possible to reach a target of one nurse to 6,400 population approximately. In order to provide one nurse to 5,000 population by 1974, as recommended by the Mudaliar Committee, there is need for 1,20,000 nurses whereas according to the present estimate there will be nearly 88,000 nurses available by 1974. Taking into consideration the problem of achieving the target of nurse population ratio, the present proposal is to provide for one nurse to five beds in all hospitals. There are 66,000 nurses available in the country at present. About 5,000 nurses qualify yearly with the existing training facilities.

On the reckoning of the programme already included in the Fourth Plan a shortage of nurses is envisaged. In point of fact, the shortage of nurses is felt even more acutely than that of doctors. It will be necessary, therefore, to ensure the continuance of the training facilities for nurses, both in the public and private sectors in the corresponding continuance of the financial assistance that was available to them in the Third Plan. Assuming that the proposed programme of enhancement of hospital facilities will be carried through, there will, in fact, be a need to augment the staff of nurses. Another problem in the field of nursing personnel is the geographical maldistribution. It is a question as to how to match the surplus in some State with serious deficits in others.

Pharmacists

According to the norm of one pharmacist for 10,000 population the total requirement of pharmacists for the country works out approximately to be 59,800. At present, there are 51,000 pharmacists in the country. With the expansion of the training facilities for pharmacists, during the Fourth Five Year Plan, it is expected that 66,000 pharmacists will be available at the end of the Plan period which will be sufficient to provide service for the hospitals, dispensaries and other health projects.

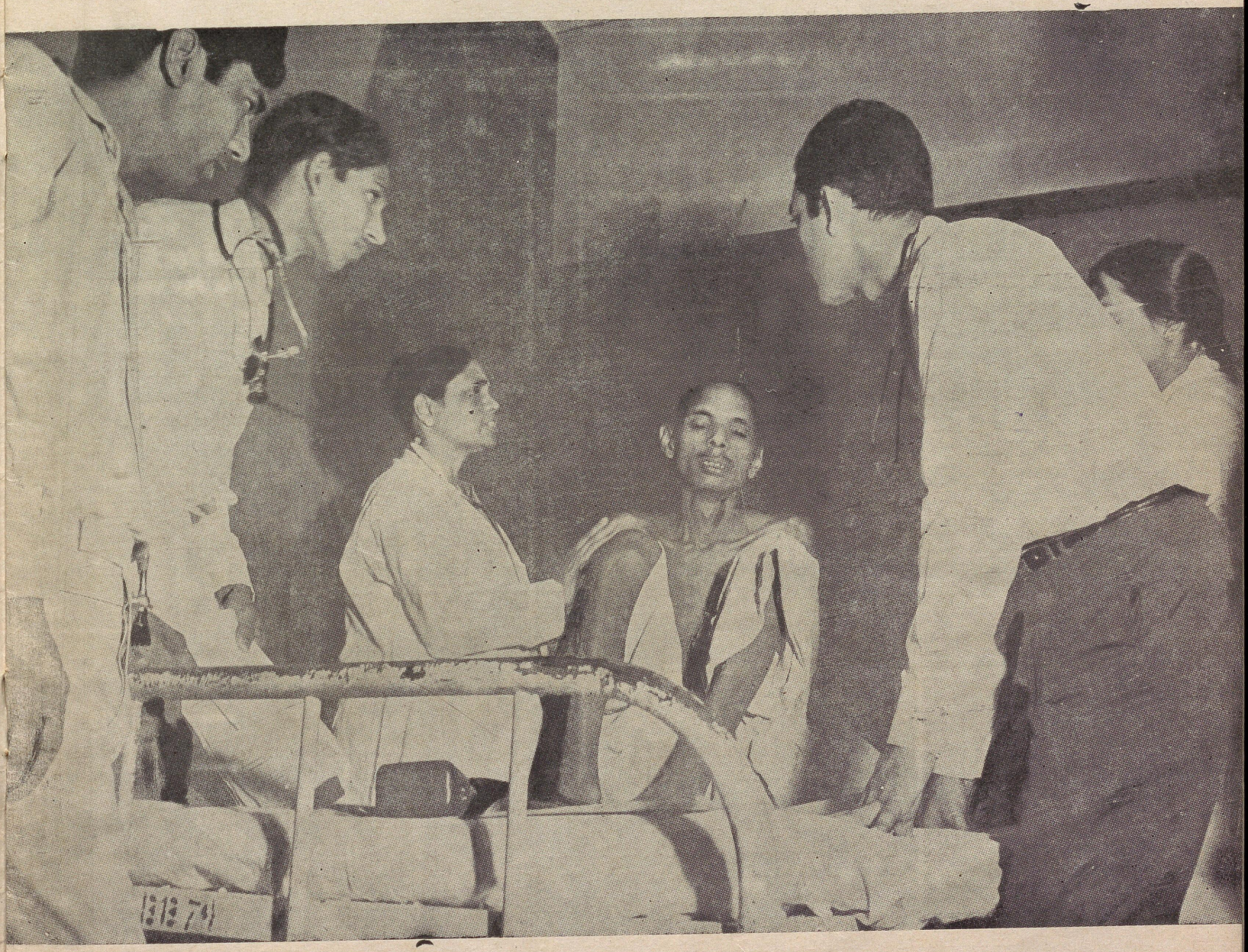
Health Inspectors

On the basis of two health inspectors per primary health centre, the total requirement for the primary health centres comes to approximately 11,000. It is estimated that about 4,000 health inspectors are already in position for service in the primary health centre areas. It is expected that about 13,000 health inspectors will be added to the present number of 20,000 health inspectors by the end of the Fourth Plan. Thus, there does not seem to be any shortage of health inspectors for service to the rural areas.

Laboratory Technicians

Similarly, for the laboratory technicians, the requirement for the rural areas is estimated to be about 5,400. Approximately 2,000 laboratory technicians are already available in the basic health services. Additional technicians will also be available from the

A gross imbalance exists in the distribution of doctors between the urban and rural areas. This disproportion continues in spite of the fact that the number of medical colleges has gone up from 25 in 1947 to 95 today, with an admission capacity of approximately 11,800 per year.



Malaria Eradication Programme. Considering the training facilities envisaged during the Fourth Plan, which will produce another 5,800 laboratory technicians, there will be no shortage of laboratory technicians to man the service.

Nurse-Midwives

According to Mukherjee Committee, pattern of having one Auxiliary Nurse-Midwife (ANM) for 10,000 population approximately, 8 A.N.Ms are required for each primary health centre serving about 80,000 population. The total number of A.N.Ms in position in 1968 in the sub-centres was 21,000. During 1969-70, the figure, however, increased to 30,000. With the expansion of training facilities for A.N.Ms, it is estimated that about 60,000 A.N.Ms will be available by the end of the Fourth Plan period. There are 332 A.N.Ms schools in the country with an admission capacity of 6,000. On an average, 5,500 students are admitted to the schools and about 5,000 have been qualifying every year so far. The requirements for A.N.Ms by the end of the Fourth Plan will be about 64,000 to man 42,000 sub-centres and 5,427 primary health centres. The number to be planned for will have to be in fact, somewhat larger in this field on account of the loss of a substantial number of trained A.N.Ms because of marriage and other social factors.

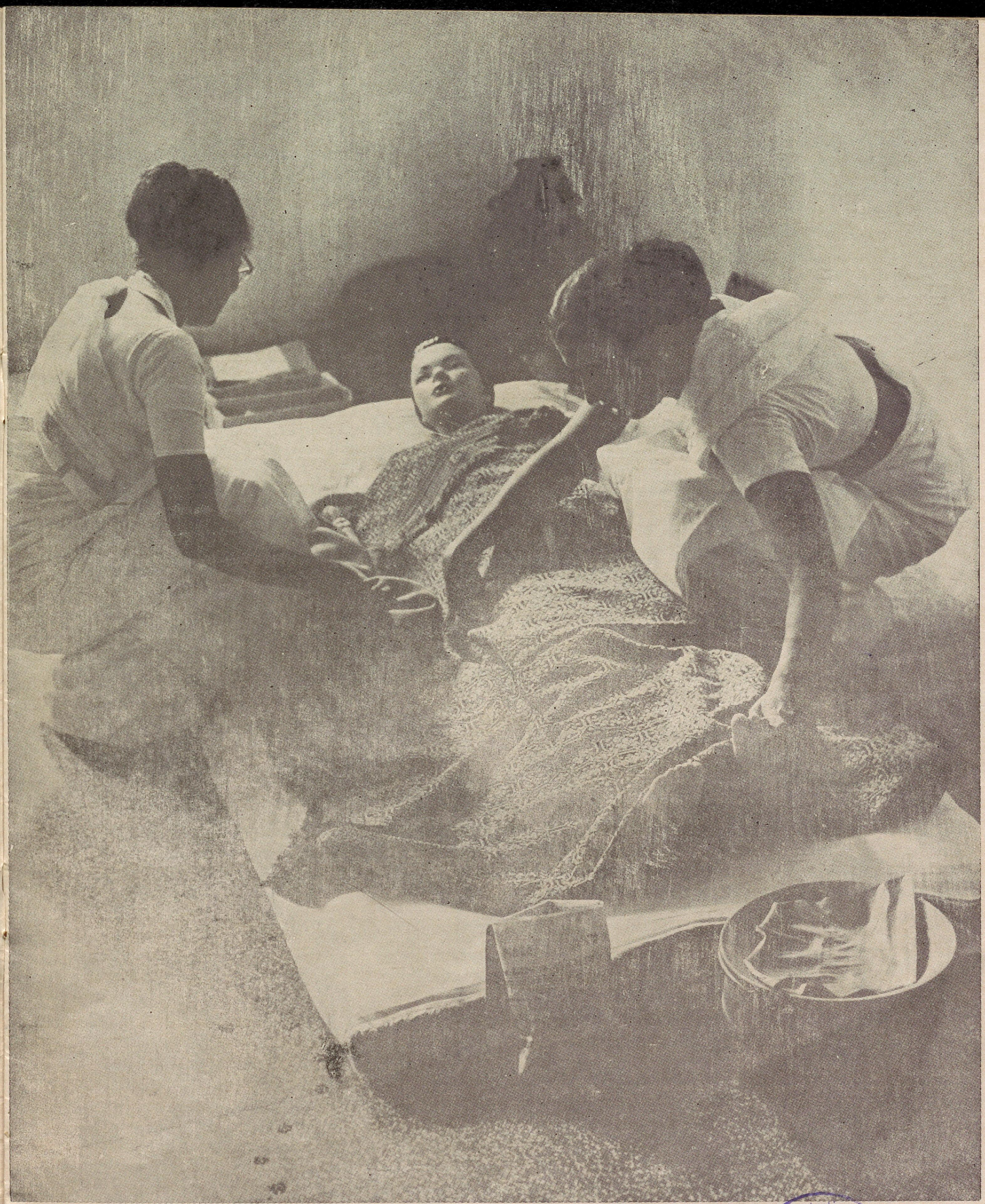
It is expected that by the end of the Fourth Plan period, each State will attain self-sufficiency in providing A.N.Ms except Uttar Pradesh, Bihar and Orissa. Attempts are, however, being made to establish A.N.Ms schools in these three States to overcome the shortage. The UNICEF assistance in this regard will also be available. It is, therefore, possible to meet the requirements of A.N.Ms by the end of the Fourth Plan through the existing training facilities and the expansion envisaged as well as by adjusting the regional imbalance which exists at present.

Basic Health Workers

It is estimated that a total of 52,000 basic health workers will be required for service in the primary health centres and other health programmes. Two types of trainings have been proposed for multi-purpose basic health workers during the Fourth Five Year Plan. This includes three months short-term course, to the persons already employed and six months long-term course for the new recruits. It is expected that 38,000 basic health workers will be trained during the Fourth Plan period. The Mukherjee Committee had recommended that malaria workers working under National Malaria Eradication Programme would be absorbed as basic health workers. It is estimated that 57 per cent of the rural area in the country is under the malaria maintenance phase at present and additional 18 per cent is expected to reach the maintenance phase by the end of the Fourth Plan, thus bringing 75 per cent of the total area in the malaria maintenance phase. With the malaria workers, in the units which will enter the malaria maintenance phase, being converted as multi-purpose basic health workers, it is expected that there will be no shortage of basic health workers to cater to the needs of the primary health centres and other health programmes. □

MAXIMISING PRODUCTION OF BASIC DOCTORS

The expansion of health education will necessarily involve not only expansion of medical education but also its re-orientation to the new demands . . . . . Apart from other imbalances a preponderance of specialization has been noticed in recent times. This cuts into the number of basic doctors needed for day to day health and medical needs of the community. The Medical Education Committee, headed by Shri B. P. Patel, recently produced a Report which was reviewed by a Medical Education Conference, attended by health administrators, Vice-Chancellors and Members of Parliament. One of the unanimous recommendations of the Conference was that while taking due care for the selection of talent required for research in highly skilled fields, medical education should aim at maximising the production of basic doctors professionally competent and emotionally prepared to serve in rural areas.



Shortage of nurses is felt even more acutely than that of the doctors.

ALTHOUGH over the period of the first three Plans and the interregnum between 1966-69 considerable progress has been made in the field of health, the gap between the availability of health and medical services as between the urban and the rural areas has widened particularly in the case of distribution of doctors and hospital beds. There are vast areas and large groups of people which have fallen far behind the rest. This situation is incompatible with the national objective of growth with social justice.

There is a national commitment to the basic policy of an urgent need to re-orient medical education, profession and health services so as to serve the needs of the people, particularly in rural areas. The reorientation of medical education, the medical profession and health service is inter-dependent.

MASTER PLAN FOR

It would be necessary to tackle all the three activities simultaneously. The expeditious implementation of the recommendations of the Medical Education Committee and the Medical Education Conference held in July 1970 as adopted by the Executive Committee of the Central Council of Health needs to be achieved, along with the modification of the Undergraduate Medical Syllabus, so as to produce a basic doctor who would have the ability to cater to the needs of the community. It is essential to establish all over the country, an infra-structure of health service that will not only take care of urban population but will also give reasonable medical care to the villages. It is important to remember that reasonable medical care for the rural people can be effective only if medical facilities are within the reasonable reach of the people. Taking into account the varying availability of communications and topographical differences, "within the reasonable reach of the people" can mean only that after the patient-member of a family is admitted to a hospital, the relatives of the family should be able to return home in time to attend to their respective avocations the next morning. This is particularly important since more than 70 per cent of the production in the country takes place in the villages. We have not only to see that the relief is provided to the ailings but also that they are not kept away from their avocations for any length of time in the interest of economic production.

The infra-structure for the rural areas, in particular, is, first of all, the establishment of primary health centres (PHCs) supported by a chain of sub-centres. Each public health centre is to cater to a population of between 80,000 and 1,00,000 and each sub-centre to a population of about 10,000. Dispensaries function, at present, somewhat in isolation from the basic health structure. They need to be integrated by allocating to the Office-in-Charge of the dispensaries a specific area for purposes of community health. In particular these officers should work in close cooperation with the staff of the sub-centres in the vicinity of the concerned dispensaries. Where a Government dispensary is not available, it would be of great advantage to associate registered private practitioners—Allopathic or Ayurvedic—with the activities of the staff attached to a sub-centre in the same area. It is obvious, however, that these facilities alone will not achieve the objective to give

greater medical facilities to people living in the interior. For this purpose, the national aim is that this complex of PHC and sub-centre must be linked with rural hospitals staffed and equipped adequately for diagnosis and treatment. For the purpose of the Master Plan, a hospital is understood to mean a medical centre having at least 25 beds and three doctors catering to the three main disciplines of medicine, surgery and obstetrics and gynaecology. This net-work is intended to deliver an integrated packet of four-fold services, *viz.*, health care, medical treatment, family planning and maternity and child health care to the rural population.

Integration of Health and Family Planning

The difficulties have been sharpened because of the addition of a new dimension to our problems, namely, the rapid growth of population. The infra-structure and the linked hospitals have to pay special attention, therefore, to the promotion of family planning. Family planning cannot succeed in isolation. The integration of health and family planning is a must for achieving the containment of the population for making the population healthy.

Family Planning has been adopted as an integral part of the national plan of socio-economic development. There has to be a balance between the material resources of the country and its numbers. The short-term objective is to aim at the reduction of the current birth rate of 39 per 1,000 to 25 over the period of a decade commencing with the Fourth Plan period. An important plank towards achievement of this objective is to operate a register of eligible couples for all the villages in the rural area and the different wards in municipal areas of the towns.

Conviction on the part of the parents who have taken to family planning that the children that are born will survive goes a long way to the achievement of success in family planning programmes. A system of coloured cards has, therefore, been evolved for issuing to the motivated couples so as to facilitate the follow-up care of the couples and health care of the children. The sight of the red cards held by a vasectomized person, orange card by a tubectomized lady, a blue card by a lady using the loop, and grey card by the person practising conventional contraception should be enough for medical personnel to extend to them priority attendance at all times.

THE MILLIONS

With the emergence of the Master Plan a new dimension has been added to the country's health and medical structure.

Community Health Care

In this, the nation may see the beginning of an assurance if not an insurance of a fairly comprehensive health care for millions of families. It is only appropriate that priority help is given to those who help themselves and who can question that the couples who have taken to family planning as a way of life have not given an earnest of their endeavour to help themselves.

The basic strategy of the Master Plan is to identify areas where population of very much more than one lakh of persons apiece are without hospital facilities. Such areas would be demarcated in red on a map indicating a convenient location therein for the establishment of a hospital. This work has already commenced. By way of illustration, maps of most of

Services to the rural people can be effective only if the medical facilities are within the reasonable reach. "Within the reasonable reach" means that the relatives of the patient should be able to return in time to attend to their avocations after getting the patient admitted to the hospital.

the districts in the three States of Andhra Pradesh, Maharashtra and Rajasthan have been prepared. Such maps will soon be ready for all the States in the country. On a rough reckoning there may well be some 2,200 such areas. These are mostly in the tracts inhabited by the tribal and other backward sections of our population. Once the red areas are located in a State, it is hoped that the various authorities and institutions will play their part in converting them into green ones with adequate medical facilities and service for family planning. If the approach that we have suggested in the Master Plan is acceptable to the implementing authorities, it would be realistic to assume that the imbalances will be considerably reduced, if not eradicated, during the period of the current Plan itself.

Out of some 30,000 beds which are envisaged to be added by the States during the Fourth Five Year Plan, it would be reasonable to expect that State Governments would establish about 20,000 of them in rural areas. In this context, the upgrading of primary health centres into miniature hospitals with at least 25 beds acquires particular significance. If the State Governments allot the bulk of the new beds in the Fourth Plan to PHCs, taluk hospitals dispensaries as well as other dispensaries, it would enable them to convert about 1,000 red areas into green ones. The Central Government would endeavour to supplement the efforts of the States by taking the initiative in respect of at least 400 units. The remaining 800 units, would be covered by supplementary efforts of governments and voluntary agencies enlisted hereunder:

(*a*) Attaching of mobile training-*cum*-service hospitals to 100 medical colleges.

(*b*) Opening of branches by voluntary private organizations or establishing new hospitals in rural areas.

(*c*) Enlarging the scope of the mobile van service of the Family Planning Department into mobile medical care-*cum*-family planning units.

(*d*) Organizing of *ad hoc* camps for comprehensive medical-*cum*-family planning services as well as specialized camps as for dental treatment or for the diseases of the eyes, with the co-operation of members of the medical profession.

(*e*) Making available by private medical practitioners and specialists of their time

Education of the people and their participation is of vital importance for the success of the health programmes.

occasionally to the rural centre in consultation with the State medical authorities.

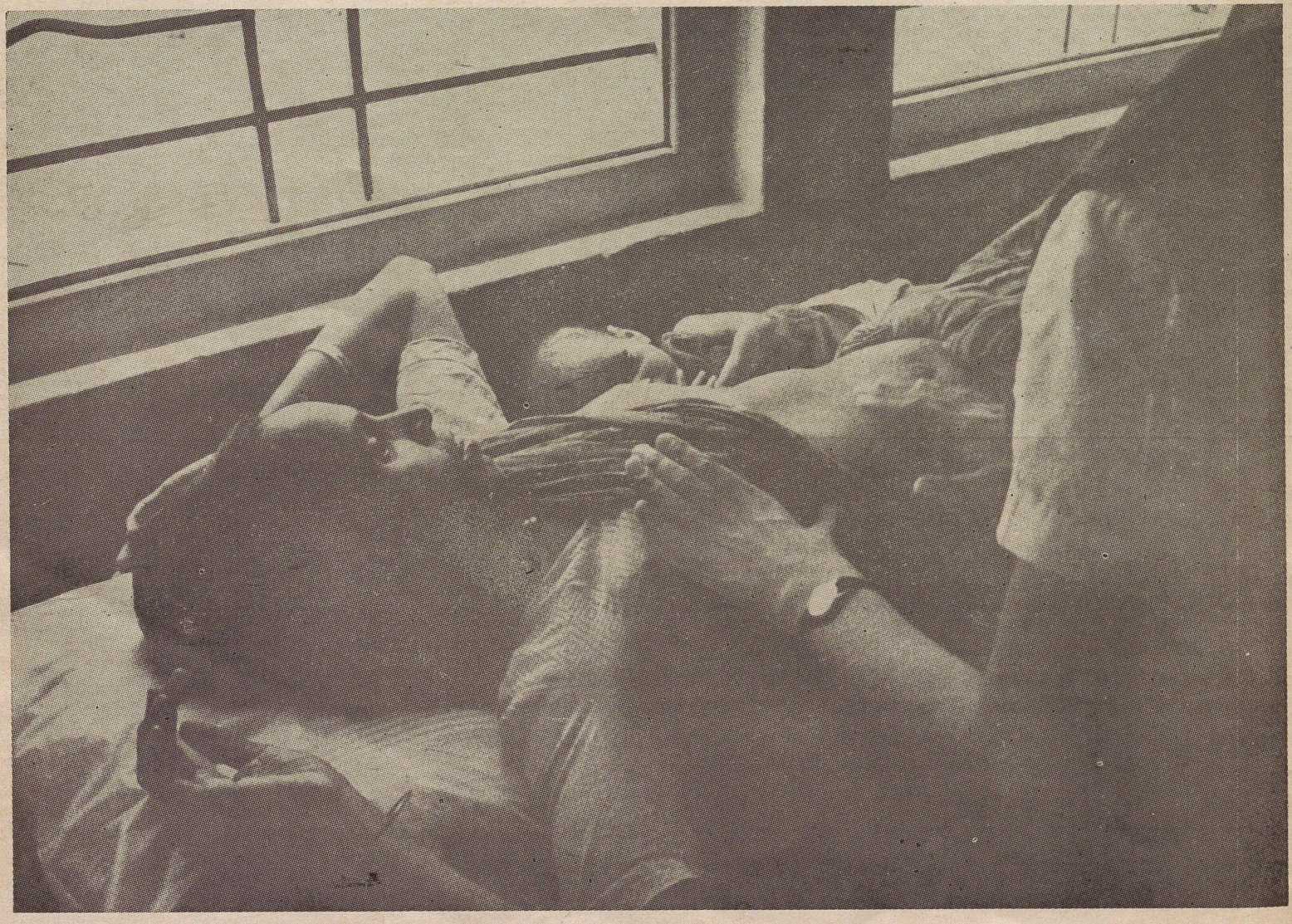
(*f*) Making available of assistance of bilateral or international agencies for financing the establishment of rural service centres.

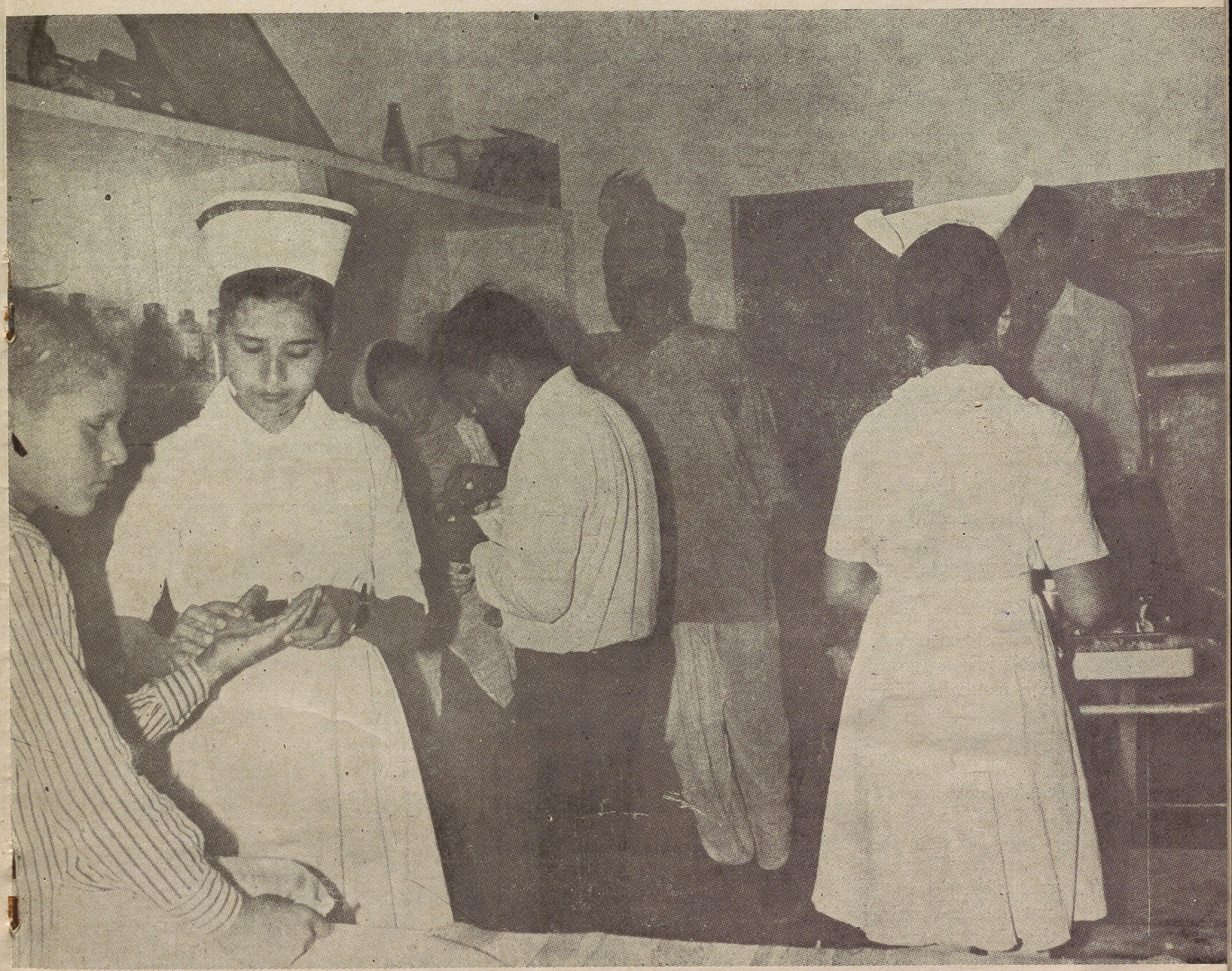
Participation of Voluntary Agencies

In order to facilitate the participation of the voluntary agencies in the implementation of the Master Plan, it would be axiomatic to liberalize the rules of assistance to such organizations. It is for consideration whether the pattern of assistance could be one-third by the Central Government, one-third by the concerned State Government and the remaining one-third by the voluntary agencies themselves, as recommended by the Executive Committee of the Central Council of Health. Such agencies would also be eligible for assistance for recurring expenditure according to the rules prevailing in the States in which they are situated. It would be possible in this way to render medical and health care to a much larger population with the limited resources at the disposal of the Government.

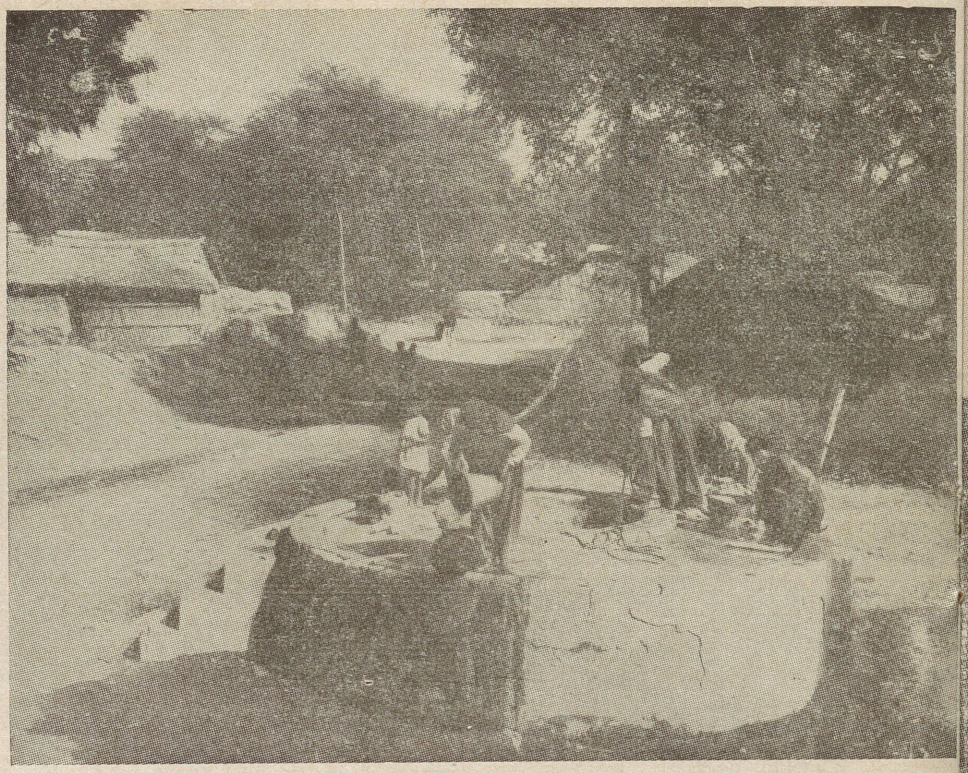
(*Contd. on page 78*)

FAMILY PLANNING AND MCH SERVICES : Family Planning assumed the character of crash programme in 1966 and rapidly developed over a short period as a specialized service somewhat parallel to the Central Health Service. However, experience has shown that the more effective approach is to deliver to the people a package of integrated preventive and curative health care, medical and child health and family planning services. Accordingly, Health, Family Planning and Maternity and Child Health Services have been integrated at the primary health centres and sub-centres in the rural areas and family planning welfare centres in the urban areas. The large hospitals are being increasingly drawn into the family planning programme under the scheme of post-partum service. Training in family planning is being made an essential component of instruction in the medical colleges so that the medical graduates turning out from these colleges are imbued with the ideal of positive health, community service and family planning welfare.





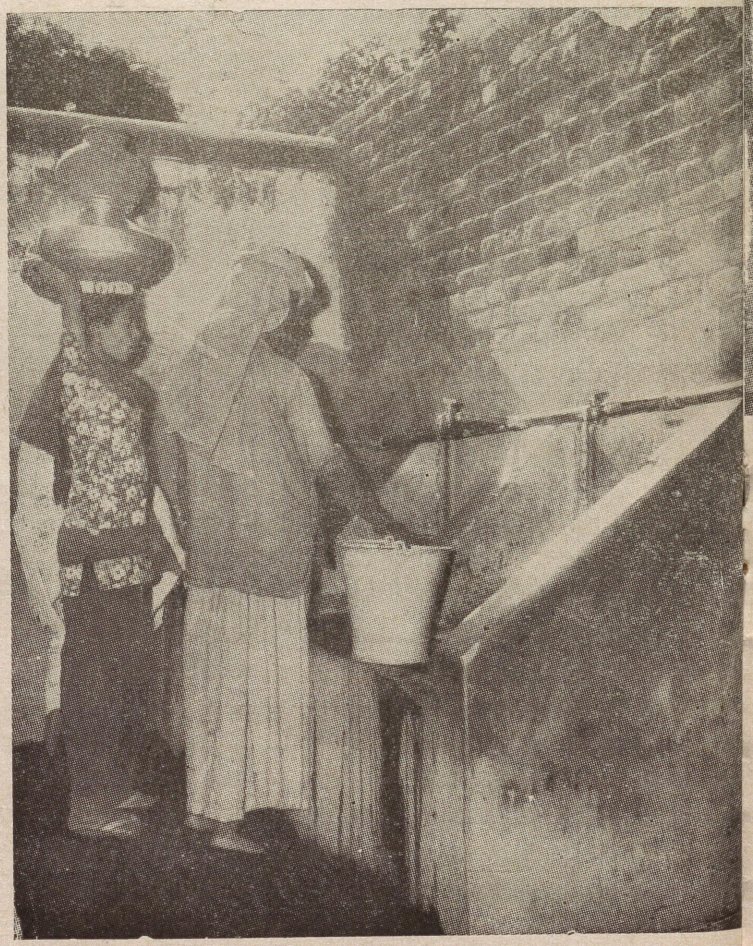
BASIC HEALTH SERVICES : The Master Plan envisages establishment of a primary health centre for 80,000 to one lakh population supported by a chain of sub-centres—one per ten thousand of population. This complex of primary health centres and sub-centres will work with the rural hospital, staffed and equipped adequately for diagnosis and treatment. This hospital will have at least 25 beds and three doctors catering to the three main disciplines of medicine, surgery and obstetrics and gynaecology. This network is intended to deliver to the rural population an integrated package of four-fold services: health care, medical treatment, family planning and maternity-*cum*-child health care.



Availability of clean and safe water supply is as much a sign of culture as an essential element in the promotion of health of the people. A high priority has been given in the Fourth Plan to the provision of drinking water to all the villages which are still without a sure source of water supply.

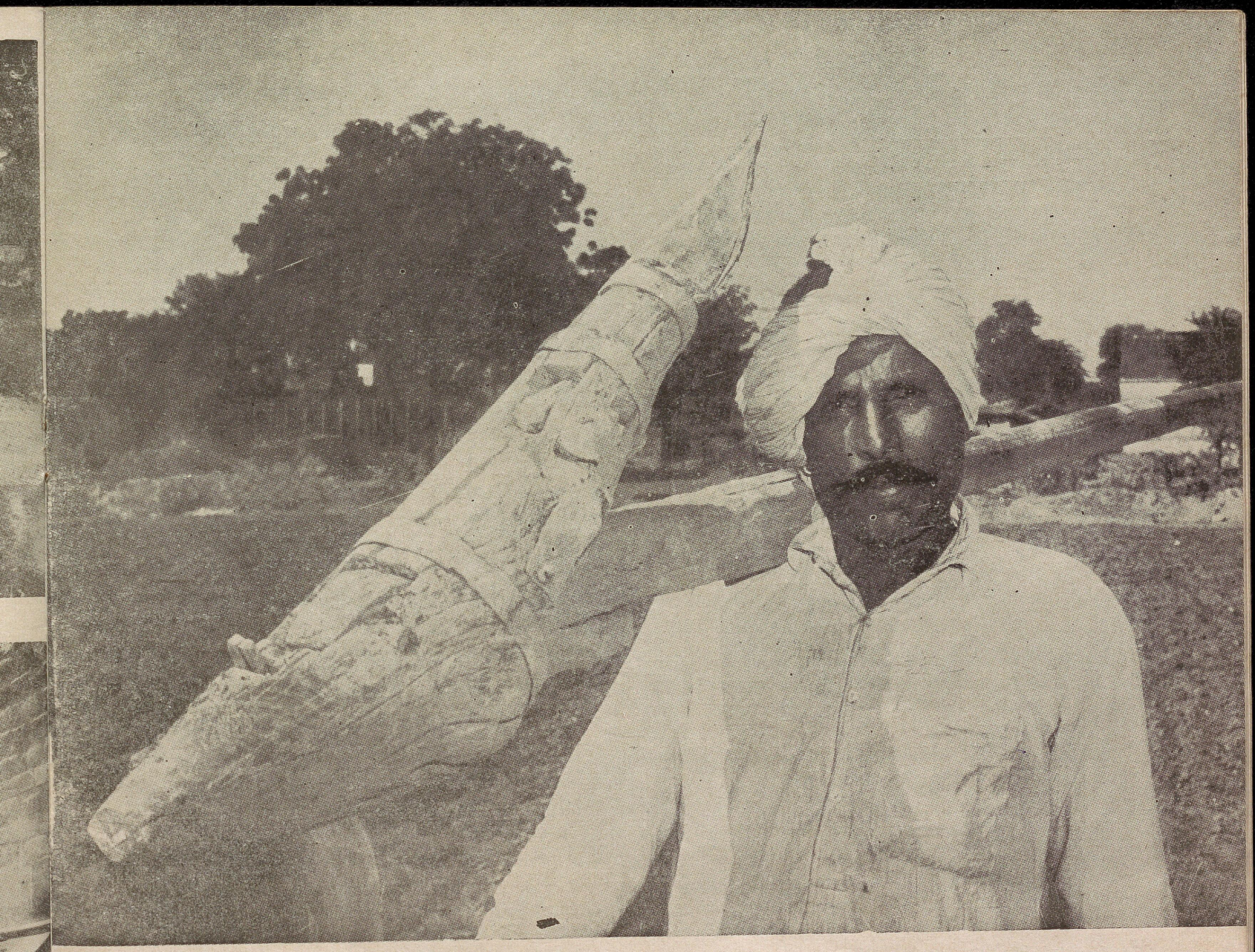
Supply of Medicines at Reasonable Prices

An ancillary support of crucial importance to the Master Plan would be the regular supply of standard drugs and medicines at reasonable prices. Working out of standard formulations together with the rationalization of prices of essential drugs and household medicines at the minimum levels consistent with the growth of pharmaceutical industries is a matter of public concern.



Rural Sanitation

Another problem which has been a cause of anxiety is the neglect of village sanitation. On the satisfactory condition of sanitation in a village depends the prevention of so many diseases. Nevertheless, very little headway is made to improve village sanitation. The ubiquitous sight of flies, filth and raw human excreta continues to dominate unabated the village scene. The problem is immense and complicated. It would be worthwhile to explore how the tackling of it could be promoted as a by-product of the programmes already on hand. In this connection, the innovative measure of the Government of Maharashtra to reward villages who have to their credit praise-worthy record of family planning holds out much potentiality for the promotion of village sanitation. The Government of Maharashtra gives a reward of an amount equal to the population of the village which attains the level of 60 sterilized



To keep the people in a state of productive efficiency, it is imperative to provide the health services for the people in our villages.

couples for a population of 1,000 persons. This amount deserves to be used for village sanitation. Depending upon this initial corpus of Rs 1,000 the village could be encouraged with further assistance of about Rs 2,000 in cash or kind towards the cost of materials required for standard type of flush latrines suited to village conditions.

The cornerstone in the Master Plan Schemes is the implementation of the policy decision taken by the Central Council of Health in regard to providing adequate facilities and incentives to the staff serving in rural areas. Various facilities for the medical profession like fellowships for advance studies both in India and abroad, promotions and other benefits must be given in such a manner that the balance of advantage lies with those members of the medical profession who have to their credit adequate service for a certain period in rural areas. It is common knowledge that doctors trained in the sophisticated sphere of urban medical colleges hesitate to accept service in rural areas. One way of mitigating this phenomenon is to ensure that adequate proportion of admission to medical colleges is available to candidates hailing from rural areas. □

VIEW POINT

• • • no new health problems in the 70s

says Shri N. Majumder
Acting Director, All-India Institute of Hygiene & Public Health, Calcutta to SWASTH HIND.

Q. Seventies are considered to be momentous for the mankind. What change do you envisage in the health status of the people in the Second Development Decade?

A. Yes. They can be momentous on many scores. The possibility of atmospheric pollution with the fall out is going to be a serious problem in the field of environmental sanitation, because the future war, if it comes, is bound to be a nuclear war. The health hazards due to the invisible radiations are quite enormous. They say prevention is better than cure. In case of radiation hazard there is no cure but only annihilation.

Q. The campaigns against the communicable diseases have shown encouraging results and it is hoped that most of the diseases will be under manageable control. What do you think will be the new health problems needing attention in the next few years?

A. The second momentous event is the extraordinary way India is tackling population explosion. The entire scientific world is looking up for the 1971 census results to see the effects of the national family planning programme. It is an entirely false hope that most of the communicable diseases will be nearly eradicated from India. As a public health scientist I cannot promise any realization of such hopes. Science speaks the truth even if it is unpalatable. The unpalatable truth remains that India is still the centre of Asiatic cholera, thousands of Indians are exposed to smallpox and malaria.

Our nation is large and equally large so are the national problems in public health and communicable diseases. I do not envisage any new health problem in the 70's but only a tightening of our administrative belts for controlling diseases like smallpox and malaria, which are known to have been eradicated in other countries.

Q. What steps do you feel are essential for minimising illness and disease and raise the standard of health of Indian people especially of rural population in this decade?

A. Health standards in any community are closely linked up with economic standards of living. Economic standards are directly proportional to the man hours of productive work and inversely proportional to the population. These two important steps have to be taken in view at the national level. More national production through more hard work and less population through family planning is the way to individual and national prosperity.

For both these activities greater participation by the population is essential. Education and still more education. □

HEALTH CONTRIBUTES TO ECONOMIC WELFARE

The task of running a health service is never glamorous, and its cost rankles with the economists and lawyers who tend to hold the senior posts in Governments. Fortunately, there are some signs that the value of health as a contributor to national economic welfare is at last being appreciated, but there is still need for better understanding of the boons and benefits accruing from effective health services ...Success is not inevitable and may be elusive, partial, or sporadic. But with success something of outstanding value will have been added to the quality of life in developing countries, and in the industrialized world there should be at least a feeling of merit acquired by disinterested action.

The seventies can be the forerunner, not of a Utopia, but of an era of world-wide civilized peace and prosperity—but only if mankind wills it. *—Sir John Charles, Former Chief Medical Officer, Ministry of Health, Ministry of Education and Home Office, U.K.*

□

REPORT

HEALTH AND FAMILY PLANNING CONFERENCE

A TWO-DAY All-India Conference on Health and Family Planning concluded in New Delhi on 11 December, 1970. The Conference discussed the ways and means to remove imbalance between urban and rural development in the field of health and medical services.

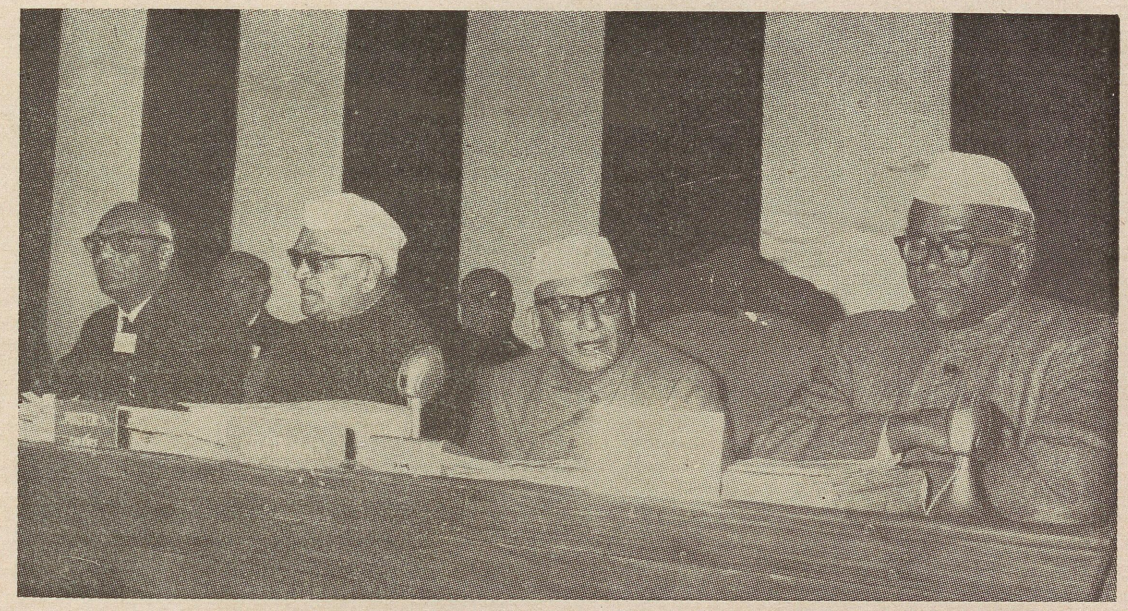
The Conference, inaugurated by the Union Minister of Health, Family Planning, Works, Housing and Urban Development, Shri K.K. Shah, was attended by State Ministers in charge of Health and Family Planning, Members of Parliament, prominent public men and representatives of professional associations and voluntary organizations.

Shri Shah said, "As I glance through the schemes launched in the past, I cannot resist having a feeling that the utilization of the Plan funds has been more for providing facilities in the urban than in the rural areas. This has led to a serious imbalance in the basic health and medical care services between these two sectors of population. Three-fourth of 1,05,000 doctors on the Live Register of the Medical Council of India are in the towns and only one-fourth in the rural areas, where 80 per cent of our population resides. Similarly, the distribution of 2,55,700 hospital beds between the urban and rural areas is in the inverse proportion of the respective population. If the present trend is not halted, there is every likelihood that the distribution of the 26,000 beds (estimated up-to-date 30,000) now planned to be set up in the Fourth Plan would follow the same pattern of preferential treatment for the urban areas".

He added that apart from the sheer force of numbers, they had also to take into account that 70 per cent of the gross national product was contributed by the rural population. With the prominence given to the agricultural production and continued emphasis on cottage and small-scale industries in rural areas, the Government was naturally concerned about maintaining these people in a state of productivity and efficiency to fulfil the programmes of production.

Shri B.S. Murthy in his welcome address said, "We have embarked on the gigantic task of controlling and eradicating communicable diseases. We have taken steps towards improving, within our resources, the water supply and sanitation in the urban and rural areas. We are endeavouring to make medical services available within easy reach of our population. We have attached considerable importance to nutrition. We are in the midst of a massive family planning programme with an ambitious objective of reducing the current birth rate of 39 per 1,000 to 25 per 1,000 over the period of a decade from 1969. The programme has gathered much momentum since 1966 and the performance is steadily rising from year to year. Nevertheless, the tempo needs to be accelerated at a faster rate if the project is to be achieved in time".

He added that India was essentially a rural country. The rural population formed the backbone of the society and were the mainstay for the all-round social and economic development of the country. They provided the basic wealth of the



Shri K. K. Shah, Union Minister of Health, Family Planning, Works, Housing and Urban Development (second from right) addressing the Health and Family Planning Conference held in New Delhi on 10—11 December, 1970. (From L to R) Shri B. P. Patel, Secretary, Health and Family Planning; Shri S. S. Dhavan, Governor, West Bengal; Shri K. K. Shah and Shri B. S. Murthy, Minister of State for Health and Family Planning.

nation. However, due perhaps to the historical background and logistic advantage, the first preference in development of medical-care facilities appeared to have gone to the urban areas and a gross imbalance existed in the distribution of medical facilities between the urban and rural areas. This disproportion continued in spite of the fact that the number of medical colleges had gone up from 25 in 1947 to 95 with an admission capacity of approximately 11,800 per year.

"Provision of safe water supply contributes more to the promotion of health of people than any other single factor. Out of 5,70,000 villages, about 60,000 suffer from extreme hardships and may be described as 'no service' villages. Another 34,000 are situated in chronic Cholera zones and 3,000 have their water infected by guineaworms or filaria. Another one lakh villages or hamlets are in urgent need of quantitative improvement. The solution of the water problem of the first category of 97,000 villages needs to be given the highest priority in the current plan period", he added.

The Conference gave a wide support to the Master Plan evolved by the Union Ministry of Health and Family Planning for provision of health, medical and family planning services in the rural areas. The Master Plan aims at providing coordinated health, medical, family planning, maternity and child health care and drinking water facilities in the disadvantaged area.

Press Briefing

Shri B.P. Patel, the then Secretary of the Ministry of Health and Family Planning briefed the press on the conclusion of the Conference. He said that implementation of the Master Plan would provide basic health amenities to the hitherto neglected countryside. He said, "The demand for a just allocation of Plan priorities had highlighted the objective of growth with social justice. There was a determined search far identifying the areas and the people who had fallen far behind the rest in sharing the fruits of the planned development for socio-economic progress". □

CONFERENCE

WORLD CONFERENCE ON SCIENTIFIC YOGA

"THE West, in recent times, has experienced a vast phenomena of growth and sensitivity centres, not unlike 'ashrams', where encountering our fellowmen in depth, has given rise to a new type of social yoga quite different from the traditional 'sadhana' of the individual yogi", said the famed Yoga expert, Mr Christopher Hills presiding over the World Conference on Scientific Yoga in New Delhi, which extended from 19 to 23 December, 1970. Over 170 delegates and a large number of observers from many parts of the world participated in the Conference.

Aim of Conference

The primary purpose of the Conference, said Christopher Hills, was "to demonstrate true Yoga at a high level of oneness". It was also to foster the establishment of an International Yoga University which will study "how the human being absorbs higher energies in the cell life for enhancement of consciousness and human potentials". The ultimate purpose, however, was to achieve a happy synthesis of science and Yoga.

The Conference broke up into different groups and held sessions (called the "streams") on as varied subjects as Scientific Measurements in Yoga, Psychology, Parapsychology, Therapy, Demonstrations of Yogic Exercises for overcoming Physical Disorders, Spiritual Aspects of Yoga, etc.

Papers were presented by renowned Yogis, professors of psychology, psychiatrists, Yoga physical culturists of different schools and practitioners of spiritual techniques of self-realization. Swami Satchitananda, in his paper, "Tranquility—Natural or Artificial", warned against the big peril of drug addiction among the young all over the world and expounded the Yogic way of living a healthy, integrated life. Dr S.P. Atreya, speaking on "Yoga and Health", made a comprehensive examination of Yoga in relation to physiology with reference to well-known and little known Yogic practices and the results they produce. Two interesting papers of medical interest entitled "A Note on the Effect of Yogic treatment on Blood Picture in Asthma" and "A study on the Effect of Yoga Training on Vital Capacity and Breath Holding Time", were presented by Dr P.V. Karembelkar and Dr M.V. Bhole respectively.

Several papers were presented on "Yogic Therapy" emphasizing the value of Yoga as a complete therapy and source of healing power. (In this context, it may be relevant to add that representatives of Swami Kuvalayananda's Kaivalayadhama, Lonavla made their presence felt at the Conference by their scientific exposition of Yoga in the modern idiom, made familiar to us in the book "Yogic Therapy" published by CHEB). Of course, there were papers galore by several eminent philosophers and mystics on every spiritual aspect of Yoga.

Scientific Experiments

Of considerable interest to scientists was the appearance of a 45-year old Indian Yogi, Swami Rama, the focal point of some sensational scientific experiments conducted with the aid of modern electronic gadgets and techniques by a team of four distinguished American scientists, including Dr Elmer E. Green, at the Topeka Laboratories of the well-known Menninger Foundation of Kansas, U.S.A.

A preliminary report of the experiments conducted on Swami Rama at Topeka has been released. It includes a detailed account of the stopping of the heart beats by the Swami for 22 seconds and the induction of several temperatures on two parts of his hand. Other experiments were his capacity to suspend the functions of the brain, ability to move objects from one place to another without actually touching them (Telekinesis), induction of weightlessness in the body, increasing of his physical power ten-fold and smashing of a wooden bar through electrical impulses produced in his body.

Interviewed by this writer, Swami Rama struck a note of warning and said that he did not believe in miracles or the occult. Yoga, he said, has a scientific basis and his mission in life has been "to help initiate a yogic-scientific revolution which would solve a wide range of problems of mankind". He added: "The experiments being conducted at the Menninger Foundation Laboratories will put the science of psycho-physiology way beyond Freud". Swami Rama's demonstration at the Conference of his electronic apparatus that measured the impulses in a Yogi from the South who stopped his heart beats for a few seconds was something unique. His experiment in "Yoga Bio-Feedback Training" was no less.

World Body Formed

The four-day World Conference on Scientific Yoga concluded with the consensus that a World Yogic Association be formed with its headquarters in Delhi. Despite some bickerings between rival sects of Yogis, the voice of sanity pleading for a marriage between Yoga and Science rang clear from stalwarts like Swami Rama, Dhirendra Brahmachari, Swami Satchitananda, Shri B.K.S. Iyengar and Dr G.S. Melkote. Their constructive suggestions included introduction of Yoga in the physical training curricula of schools and colleges, working out of a standardized practice of Yoga for universal usage, setting up of scientific laboratories for Yoga Science experimentation, preparation of a bibliography of the Yogic texts and suggestions for the training of competent Yoga teachers in India. A 25-member Committee, including 21 Indians and four foreigners including Mr Christopher Hills, was formed to follow up the decisions of the Conference.

—K.M.T.

STATEMENT ABOUT OWNERSHIP AND OTHER PARTICULARS ABOUT NEWSPAPER *SWASTH HIND* TO BE PUBLISHED IN THE FIRST ISSUE EVERY YEAR AFTER LAST DAY OF FEBRUARY

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(See Rule 8)

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I, Dr B.S. Sehgal, hereby declare that the particulars given above are true to the best of my knowledge and belief.

New Delhi

Sd./- (B.S. Sehgal)
Signature of Publisher

ON FAMILY PLANNING

NEED FOR RESEARCH ON FAMILY PLANNING

SHRI T.N. SINGH, Chief Minister has emphasized the need for research work to find safe and dependable methods of contraception for controlling the growth of population. He said that they should depend on indigenous method and researches and experiences gained in the field in this country rather than depend on methods evolved in other countries. He felt that there was enough scope for research in oral contraceptions as a method of family planning.

He said the increasing growth of population was a serious problem and should be tackled in a determined way.

The Chief Minister was speaking at the prize distribution function held at Lucknow on November 20, 1970 at the end of the two-day Seminar of Senior Medical Officers and Technical Staff of the State Medical Department.

The Chief Minister said that Uttar Pradesh was lagging behind and the performance here was less than in other States. He hoped that the State would improve its performance and by next year Uttar Pradesh would become one among the other States who had done well.

Earlier, Shri S.P. Pande, Medical and Health Commissioner-*cum*-Secretary, gave a review of the progress of the family planning programme in the State. He said that the performance had been improving and this year the State has achieved 48 per cent more than the last year. The family planning activities should be intensified further and performance stepped up, he added.

Shri S.N. Pandita, Joint Secretary, Medical Health and Family Planning, referred to the National Family Planning Drive which was organized in September, 1969 and said that 52 per cent of the target fixed for the drive had been achieved.

Fifteen prizes and certificates were distributed to the best divisions, best districts and best doctors and workers.

Meerut was adjudged the best division and Bijnore the best district.

Dr Onkar Nath Gupta of Gorakhpur District was awarded prize for performing the highest number of vasectomies. Dr (Mrs) I.G. Speed of Ghazipur received a prize for performing the maximum number of IUCDs. Dr (Smt) S. Jaiswal of Allahabad was given a prize for performing largest number of tubectomies.

SECOND P.H.N. INSTRUCTORS' WORKSHOP

NURSES have important roles to play as administrators, supervisors, educators and researchers, said Dr (Mrs) S. Krishnan, Principal, College of Nursing, New Delhi.

Dr Krishnan was awarding certificates to the seven participants of the Second Public Health Nurse-Instructors' (PHNIs) Workshop on Family Planning on 12 December, 1970 in New Delhi. The Workshop was organized by the Central Health Education Bureau from 7—12 December. The PHNIs were from the Regional Family Planning Training Centres of the States of Bihar, Gujarat, Orissa, Punjab, Tamil Nadu, and Uttar Pradesh.

As a supervisor, the nurse had to guide in case-finding which was her primary function. Besides, she had to perform a clinical function in the demonstration and use of family planning methods, said Dr Krishnan.

Under the educational role, the nurse had to be careful about when, where, how and to whom she had to impart family planning education.

Her role of research came at the post-graduate level. She had to help in assessing the efficacy of the programme in the community where an individual was doing family planning work, said Dr Krishnan.

Group Work

The participants were divided into two groups during the Workshop and were assigned two projects. The group presented the reports of these projects on the concluding day. Representatives from the WHO, USAID, NIHAE, College of Nursing, were also present.

One group had reviewed the basic curricula of general nursing for integration of family planning contents.

The group found that the details of the contents on family planning integration had not been included in any of the subjects recommended by the Indian Nursing Council into the general nursing and suggested the ways and means of integration of family planning contents.

The second group reviewed the basic nursing curricula of the auxiliary nurse-midwife for integration of family planning. The group felt that there was a need and scope of including certain subjects like basic concepts of sociology and psychology so that the auxiliary nurse-midwife was prepared to work more efficiently in the community.

Earlier, in his address of welcome, Dr B. S. Sehgal, Director, Central Health Education Bureau, said that in principle the family planning had been integrated with all health services. But it was just not enough. It had to be practised by the worker and integrated into his day-to-day functioning.

Miss Mani Rao, Senior Health Educator, CHEB proposed a vote of thanks.

NIRODH DISTRIBUTION CAMPAIGN

A CONFERENCE of the Medical Officers in the Krishna District was held at Machilipatnam on 10 November, 1970 to chalk out a programme for distribution of Nirodh in the district involving 532 field workers and 54 Medical Officers in addition to other non-medical supervisory staff. It was envisaged to cover all the 946 inhabitated villages and other urban areas in the district from 26 December, 1970 to 10 January, 1971. Three lakh and ninety thousand pieces of Nirodh could be distributed to 1,30,000 couples out of four lakhs of couples in reproductive age-group with an objective to popularize the use of Nirodh.

Nirodh acceptance survey conducted by Dr Everett Rogers, Professor of Communications, Michigan University, deputed by Ford Foundation and Dr Bhaskara Rao, Programme Associate, F. P. Department, Government of India and Sri C.G. Shankara Rao, Mass Education and Information Officer of Krishna District in Mudunuru and Gopavaripalem villages revealed that there was high degree of acceptance for Nirodh among educated people in the District for spacing of children.

NEED TO STEP UP F.P. DRIVE

A THREE-DAY family planning orientation training camp was organized by the District Family Planning Bureau, Kamrup Gauhati, in collaboration with the Dimoria Anchalik Panchayat at Sonapur recently.

The camp was inaugurated by Shri Padum Das, a local leader and a Panchayat president.

In his inaugural speech Shri Das stressed the need for effective publicity for family planning in the rural areas.

Shri Braja Nath Sharma, Family Planning Information Officer, Gauhati explained the objective of the training camp and dwelt on the problems of population growth. Shri Asvini Kumar Barua, Field Publicity Officer, Family Planning, described the family planning programme as a "sacred' one.

The meeting was also addressed, among others, by a local *Maulavi* who appealed to the Muslim population to give up the 'wrong notions' about family planning.

INDIA MEETS THE CHALLENGE OF POPULATION GROWTH

INDIA has been praised for launching a national family planning programme to meet the challenge posed by population explosion by Dr Douglas Ensminger, who recently retired as Head of the Ford Foundation in this country.

In an interview to *The Christian Science Monitor*, from the U.S.A., Dr Ensminger says, "instead of finding things wrong with India, let us look at what this country has achieved during the last two decades. The tragedy is that so many of the gains have been lost in the population increase". Yet, he states, the country deserves "high marks" for launching a national programme to check the population growth, "a job that had never been done before".

Dr Ensminger, has two suggestions to make family planning more acceptable to the Indian people. One of them is to offer a Rs 1500 'educational bond' to a couple accepting sterilization after two children. What the Indian parents desire most for their children today is better education.

The second measure, Dr Ensminger suggests is introduction of the social security scheme for parents. Such a measure, he opines, would assure these parents of an income in their old age and remove the need of having a large number of children.

Around the states

GUJARAT

Promoting Standards of Dental Education

"THERE are today, 15 Dental Colleges and about 38 Post-graduate departments in all the specialities of Dentistry at the various Dental Colleges", said Dr K.L. Shourie in his Presidential Address at the 41 Session of the Dental Council of India held on 10 November, 1970 at Ahmedabad. "The Council's foremost task being to promote and lay down standards of dental education, it has, therefore, always been alert to bring in changes and modifications in the various courses of dentistry, so as to make them more realistic and properly shaped to meet the prevailing conditions in the country", Dr Shourie said.

He added that the Council while constantly trying its best to maintain proper standards of dental education, a number of serious problems had cropped up in almost all the Dental Colleges. The foremost being (*i*) shortage of dental equipment, instruments and materials, and (*ii*) student's kit.

Dr Shourie added, "the present dentist: population ratio is one dentist to every one lakh of our population. It is an anomaly that statistically on paper we have acute shortage of Dental Surgeons and actually we find unemployment amongst Dental Surgeons".

MYSORE

Development in Electro-Medical Equipment

THE Electronics and Radar Development Establishment has made a significant contribution in the development of electro-medical equipment. Research in this field was started at the L.R.D.E., Bangalore in 1962 in a small way.

All complicated medical electronics systems have been of imported origin so far in our country. Till recently no private or Governmental agency had undertaken the development or manufacture of such systems. This was mainly due to the lack of specialized know-how and the generally poor internal demand for such equipment which made it an uneconomical venture.

Lately, in October, 1967 work in this field at the L.R.D.E. was stepped up. A number of tasks were allotted to the L.R.D.E. through the Defence Research and Development Organization and qualitative requirements were drawn up and formal projects were allotted in April, 1968.

Items of equipment since designed and developed at the L.R.D.E. include prototypes of automatic patient monitor, cardiac diagnostic and therapeutic unit, DC defibrillator, cardiac pacemaker (internal, external and transvenous), blood gases analysis system, foetal electrocardiograph, electro-cardiograph, electro-anaesthesia apparatus, implantable pacemaker, intravenous fluid, driprate meter and phonocardiograph.

Some of these equipment have been fabricated in small quantities and are undergoing comprehensive clinical trials before L.R.D.E. sign manufacturing contracts with commercial firms for manufacture and general sale in the country.

Export of these equipment is also visualized.

DELHI

Post-graduate Studies in Ayurveda

TWENTY post-graduate departments will be established in selected colleges of Indian Systems of Medicine during the Fourth Plan under the Centrally sponsored schemes. A sum of Rs 150 lakhs has been provided for this purpose in the Plan.

During the current year, post-graduate departments will be set-up in Government Ayurvedic College, Trivandrum, and State Ayurvedic College, Lucknow.

This information was given by the Union Minister for Health, Family Planning, Works, Housing and Urban Development, Shri K.K. Shah, to the members of the consultative committee attached to the Departments of Health and Family Planning on 26 November, 1970.

Referring to the demand by some of the members for setting up a well-equipped Ayurvedic institution on the lines of the All-India Institute of Medical Sciences, Shri Shah said detailed planning would be required for establishing such an institute. The setting up of the proposed Indian Medicine Central Council in the near future will also help in this direction by standardizing Ayurvedic education in various colleges, the Minister said.

Low Cost Indian Valve for Brain Surgery

A LOW COST indigenous valve for brain surgery has been developed at the All-India Institute of Medical Sciences by Dr P. Upadhyaya, Associate Professor of Surgery (Paediatrics Surgery) in collaboration with the Indian Institute of Technology, New Delhi. There are several thousand patients suffering from hydrocephalus and other causes of increased intracranial tension who are in dire need of a valve. In the absence of suitable shunt device these cases suffer from progressing degeneration of the brain, blindness and deafness. (The imported valves have a prohibitive price ranging from 75 to 150 dollars which is beyond the means of an average Indian. Moreover the delay in importing the valve causes irreparable damage to the brain even in those cases who can afford to import.)

The indigenous valve is completely made of silastic, a type of rubber which is well-tolerated by the body tissues. Extensive studies have shown that the pressure flow properties of this valve could be favourably compared with the imported valves. Its price is likely to be about Rs 20 per valve. The indigenous valve has been used in several patients at the All-India Institute of Medical Sciences and its performance has been found to be extremely satisfactory. Efforts are being made to manufacture the valve on a mass scale so that a large number of children afflicted by hydrocephalus could be saved.

CHEB Technical Study Forum

THE Technical Study Forum of Central Health Education Bureau (CHEB), started in July 1969 with the object of providing an opportunity to the staff to gain up-to-date knowledge about the development and contributions of various disciplines relevant to health education, arranged nine lectures and discussions by out-side specialists since its inception. The subjects ranged from "Recent Developments in Anthropology" to "Family Planning Around the World". Among the galaxy of speakers were such eminent personalities like Dr Margaret Mead, the famous anthropologist, Dr David Mandelbaum, Professor of Anthropology, University of California, Dr Moye Frymann, Director, International Population Centre, North Carolina and Dr Helen Martikainen, Advisor in Health Education, WHO. The meetings were well attended and provoked stimulating and creative discussion on every occasion. CHEB makes it a point to contact experts in different disciplines visiting the capital and bill them for the programmes of the Forum.

International Award for Dr Khoshoo

DR P.N. KHOSHOO, Assistant Director-General of Health Services (Leprosy) has been awarded the Companionate of Merit of the Military and Hospitaller Order of St. Lazarus of Jerusalem.

The decoration was presented by Shri K.K. Shah, Union Minister for Health, Family Planning, Works, Housing and Urban Development on 11 December, 1970 in the Vigyan Bhavan.

Dr Khoshoo was awarded this medal as a recognition of his meritorious services in the field of Leprosy Control in India. He has remained Member of the Leprosy Expert Panel of WHO, Geneva for the last seven years and is the Member of the Expert Group on Leprosy of the I.C.M.R. He is also the Member of over half a dozen other National Committees on Leprosy.

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Dentistry

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Nursing

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Browning, Ethel—Toxicity of industrial metals, 2nd edn., London, Butterworths, 1969. 383p.

International encyclopedia of pharmacology and therapeutics—200 vols. Oxford, Pergamon. Sec. 13-Anticholinesterase agents vol. 1. by A.C. Karczmar *et al.* 1970. 508p.

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