

THE BHORE
COMMITTEE



**COMPENDIUM
OF
RECOMMENDATIONS
OF
VARIOUS COMMITTEES
ON
HEALTH DEVELOPMENT
1943-1975**

Issued by

CENTRAL BUREAU OF HEALTH INTELLIGENCE
DIRECTORATE GENERAL OF HEALTH SERVICES
MINISTRY OF HEALTH AND FAMILY PLANNING
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PREFACE

Health Development is a continuous and dynamic process. It interacts with the overall development process of the nation and, therefore, from time to time needs the strategies for development of health services have to be reviewed and altered in tune with the overall Development plan.

Since Independence, starting with the First Development plan based on the Health Survey and Development Committee (Bhore Committee) we have already marched a long way to reach the goal, yet much remains to be achieved.

Subsequent Committees took stock of the progress made and suggested modification at some approaches and made certain recommendations to achieve the goal. Some of the recommendations of different committees are very much relevant even today. Some of the reports of these Committees are out of print or not readily available to Administrators, Decision Makers and Planners for consultation and references. In this publication an attempt has been made to reproduce the summary of recommendations of various Committees constituted by Govt. of India from time to time. It is hoped that this publication will be useful for the Administrators, Planners, Decision Makers, Research Workers as well as Programme Officers and will serve as a ready reference.

I am thankful to Dr. S. K. Sen Gupta, Deputy Director General; Dr. Mehendra Singh, Director, Central Bureau of Health Intelligence; and particularly to Dr. S. N. Bagchi, DADG (AR) and Mr. V. P. Bhasin, Statistician, for their assistance in bringing out the publication.

(Dr. M. D. SAIGAL)
Addl. Director General (PH)

Dated 4th February, 1985,
NEW DELHI

AN OVER-VIEW OF MAJOR RECOMMENDATIONS

In 1943, the then British Government governing India appointed the Health Survey and Development Committee with Sir Joseph Bhore as Chairman. The Committee popularly known as Bhore Committee, published its report and recommendation in 1946. Although the Health Development plan of Bhore Committee dealt with a country, then under British occupation which now comprises three Independent countries—India, Pakistan and Bangladesh—the recommendation can be taken to be the beginning of modern health planning and development process of all these three countries.

The recommendation of the Committee are comprehensive covering almost all facts of health including development of health manpower and mechanics of funding etc. in the context of the plan. The main principles underlying the Committee's proposal for future health development of the country centred round the following guiding principles :—

- (a) That no individual should fail to secure adequate medical care because of inability to pay for it.
- (b) The health programme, must, from the very beginning, lay special emphasis on preventive work with consequential development of environmental hygiene.
- (c) The health services should be placed as close to the people as possible in order to ensure the maximum benefit to the communities to be served.
- (d) It is essential to secure the active co-operation of the people in the development of health programme, and active support of the people is to be sought through establishment of Health Committee in every village.*
- (e) The Doctor—the leader of the health team should be a 'Social Physician', who should combine remedial and preventive measures as to confer the maximum benefit on the community, and the future doctors should be trained to equip them for all such duties.

*In fact when the Bhore Committee sitting in New Delhi, was formulating the particular objectives, the All India Institute of Hygiene & Public Health, Calcutta, under the guidance of Dr. Grant as Director of the Institute was experimenting with a similar model at Singur Health Centre. This expenditure provided the background and encouraged the Committee to incorporate this objective in particular.

It is striking that the recommendations of the Bhore Committee speaks of 'Primary Health Care Unit' with people's active co-operation long long before the Alma Ata declaration of 1977. In fact, the recommendation indicated that if the proposals were carried out truthfully, then perhaps India could have achieved 'Health For All By 1971 AD'. It is also interesting to note that the Committee touched upon population problem and indicated containment of population as one of the facets of health development, besides village and town planning as part of environmental sanitation and health.

But various constraints prevailed upon after Independence which caused the 'Health' to occupy a lower priority of national problem, and thus Committee's goal remained unachieved. However, it set out a pattern of health development through primary health care unit which continues till date, the basic objective and framework of all the subsequent Health Development plan. In one word the Bhore Committee's recommendations provided inspiration for the development of comprehensive health services for India.

After nearly 13 years of the publication of Bhore Committee Reports, the Govt. in 1959 appointed a Health Survey and Planning Committee under the Chairmanship of Dr. A. Lakshman-swami Mudaliar (Mudaliar Committee) to assess or evaluate the field of medical relief and public health since the submission of the Health Survey and Development Committee's (Bhore Committee) report, and to review the first and second Five-Years-Plan Health Projects, and to formulate recommendations for the future plan of health development in the country.

Between the period from publication of the report of the Bhore Committee (1946) and the appointment of the Mudaliar Committee (1959) many historical events took place in the country.

The country earned Independence (15th August, 1947) and India was partitioned. At the time of Independence there were 9 Provinces and some 600 Princely States in India. These States were either merged to adjoining Provinces or constituted the Centrally Administrative Units, or integrated to form new States. This geo-political development provided new situation, not conceived of by the Bhore Committee. It has been stated that, as a result of Partition, 'British India' lost about 365,000 square miles of land area and an estimated population of 88 million. On the other hand, following the integration of the Princely States, approximately 716,000 square miles of land area and an estimated 93.2 population had added to the old territory of British India, which to-day constitutes the Republic of India. Some other events took place following Independence. A few of them

relevant to health development may be briefly pointed out below:—

(a) Adoption of the Constitution of India (26th January, 1950); (b) Re-organisation of States; (c) Abolition of Indian Medical Service; (d) Establishment of Planning Commission; (e) Establishment of Central Council of Health under Article 263 of the Constitution; (f) Launching of the Community Development Programme; (g) Entry of International Agencies in the field of Health.

With these major back-grounds, the Mudaliar Committee sat to evaluate the measures already taken in the country and to suggest further development plan etc.

The Committee felt that input given in 1st and 2nd Five-Year-Plan were too meagre in respect of need of the country in health sector. It appears that 5.9% (Rs. 140 crores) and 5% (Rs. 225 crores) of the total outlay in respective 1st and 2nd Five-Year-Plans for health sector is far below the recommendation (10%) of Central Council of Health or that of the Bhore Committee.

In other words funding in health did not commensurate with the need for health in any plan period.

The Committee was of the view that the main area of administration with which the Health Ministry was concerned were (a) provision of adequate medical care—prevention and curative; (b) the training of medical and para-medical personnel, including those for dental care; and (c) research. All the three areas are obviously interlinked and taking the country as a whole, it is only through a co-ordinated programme of action in which the Centre and the State co-operated that satisfactory and speedy results can be achieved.

The Mudaliar Committee, therefore, recommended the following major actions:—

(a) Formation of Central Health Cadre in which senior posts in the Central and State Ministries of Health will be included; (b) Extension of the functions of the University Grants Commission to education in the fields of the Medicines; Engineering, Agriculture and Veterinary Science; (c) Institution of National Programmes in regard to Malaria Eradication, Smallpox, Cholera, Leprosy, Tuberculosis and filariasis; (d) Making the Central Council of Health more effective than at present.

With regard to the infrastructure of Primary Health Care as was existing during the period, the Committee observed that the existing PHCs were far away from the norms set up by the Bhore Committee, having variation from State to State. The Committee felt that no further PHC be developed and that

existing PHCs should be brought to the norms recommended by Bhore Committee, and Mobile Health Care Unit to be introduced for primary health care. This shift from PHCs to Mobile Units was heavily influenced by financial constraints prevailing at the point of time, when Govt.'s policy was aimed at Industrialisation as a top priority item. However, several vertical programmes for control of Communicable Diseases were initiated following the suggestions of the Mudaliar Committee.

The Committee also reviewed the progress made in health sector following Bhore Committee recommendation, and made number of observations with regard to all aspects of health including Health Manpower, Training & Education, Indian System of Medicine, Research etc. On administration, the Committee felt that the Director General of Health Services should for all purposes, enjoy the status of an Additional Secretary, and Director General's views and recommendations should be dealt with the highest level without the intervention of the Secretariat. Regarding International Health matters, the Committee felt that there should be a separate Cell in the DGHS to co-ordinate all activities of all the international agencies including Bilateral cultural exchange programme. Head of such Cell should invariably be the Secretary to the Delegation to World Health Assembly etc.

During the period the population problem and its organisational matter was reviewed by the Central Family Planning Council, and in 1965, the Council appointed Special Committee headed by the then Secretary of Health (Sri B. Mukherji) to review staffing pattern and financial provision under Family Planning Programme.

The Committee, while recommending various organisational and administrative reforms of the existing pattern of Family Planning Services, and IUD Units and reviewing the potentialities IUCD recommended specially Mobile Sterilisation and Mobile Education and Publicity Unit for each District Family Planning Bureau to intensify the activities of the programme, because the Committee felt that in commensurate with very large base-population and difficult geographical situation, efforts need to be intensified in order to achieve any measurable effect on the overall birth rate. The family planning infrastructure remained independent but largely followed the structural pattern of Primary Health Centre/Sub-Centres and often located within the same set-up at peripheral level. As in 1973, there were 399 Sterilisation Units and 456 IUD Units throughout country under Family Planning Programme. Family Planning Programme alongwith other health measures brought down the crude birth rate from 41.7 (1951-1961) to 34.5 in 1975.

During the period, vertical programmes of control of different communicable diseases, family planning and nutrition programme had been fairly developed. But each programme ran independent of each other, and at peripheral level, generally they were working within the perimeter of PHC System. It implies that for same geographical-area, which comprises of 80-120 thousand population at PHC level, a large number of health workers belonging to different vertical programme area are covering a very large identical population at any point of time. It was thought as to whether such health workers could be integrated, and used for multiple programme with much smaller geographical area and more smaller population for respective worker, which may result in more intensified activities in a newly defined smaller activity zone for each worker.

A Committee on Multipurpose Workers (Kartar Singh Committee) under Health and Family Planning Programme was set up in 1972 following the recommendation of the Central Family Planning Council, to examine this and other associated issues.

The Committee's recommendations were accepted and a new set of worker (Multi-purpose) drawn from the supervisory level of existing health workers at PHCs working under different vertical national programmes were created who would work in the field for all the existing vertical programmes or most of the vertical programme at peripheral level. In other words, attempt has been made to integrate the services at peripheral level maintaining the vertical structure at top. By 1983, almost all the existing workers at PHC level have been trained as multi-purpose workers and are in position. However, the band of multipurpose workers, drawn from vertical programmes have yet to develop a team spirit, since still they are psychologically and administratively linked with the respective vertical programmes run from the top.

However, various development plans and modifications of the infrastructure of health care delivery system, which includes MCH and F.P. Services helped to a great extent in reducing mortality and morbidity rates of various diseases and improved the health indications to reflect the impact of the services rendered to the community.

During the period of last 3 decades or more the mortality rate has declined from 27.4 in 1941-51 to an estimated 12.4 in 1980. The infant mortality rate has come down from 140 during fifties to 125 in 1978. The life expectancy at birth has gone up from 32 years in 1981 (Census) to about 52.09 years in 1961-81.

Health care facilities have been expanded. At present there are 6670 hospitals. (Allopathic system) having 4,66,77 beds. A present the bed population ratio is 0.68 per thousand population.

There are 16754 dispensaries, of which 11590 are in rural area and the remaining 5164 in urban area. There are 5739 Primary Health Centres, 59511 Sub-Centres. The 351 upgraded Primary Health Centres have been or being provided with Specialists (Medicine, Surgery, Obstetrics & Gynaecology and Paediatrics) services. Number of Medical Colleges has risen to 106 from 25 (1947-48). Steps are being taken for 'adoption' by the Medical Colleges of 3 primary Health Centres each, thereby Specialist Services, teaching components etc. will percolate to rural areas contributing towards improved health care and exposing the students to actual rural set-up for orientation towards rural backgrounds. (Reference Srivastava Committee Report).

With regard to indigenous system of medicine, at present there are 275 hospitals of Ayurvedic System-19 of Unani System, having 9783 and 621 beds respectively. There are 18 hospitals under Nature Cure and Yog System. There are 12827 and 986 dispensaries under Ayurvedic and Unani System respectively. Siddha System has 426 dispensaries and Nature Cure System has 43 dispensaries.

A chain of research Institutes have been developed in almost all branches of Medical Science and Post-Graduate Medical Education is available in approx. 2/3rd of the Medical Colleges, besides in almost all the research or in National Institutes in different branches of Medicine and Public Health. In short, development of Medical Research, Education and quality of Health Care in India, as achieved has already put India in an enviable position amongst the developing countries. Some of the dreadful infectious diseases like Smallpox has been eradicated. But the health care, in real term, to the teeming millions in rural area, comprising 76% of the population is still aluding the planners and decision makers. The accessibility to health care delivery infrastructure by the community they serve, remain at a low level, and benefit of health care delivery infrastructure did not percolate to a very large section of population in any PHC. In 1974, Govt. appointed the 'Group on Medical Education and support Man Power' who specially examined the problem. Alongwith other recommendations, like setting up of Medical & Health Commission, National Health Services, Involvement of Medical Colleges in the community health care etc. The committee recommended a band of health workers from the community to be linked to the PHC set-up—Thus taking the services from PHC to community.

It was also realised that development of health infrastructure, however, well planned it may be, cannot be effective reasonably unless other developments of rural area do not march alongwith

it. Therefore, a Minimum Need Programme for the rural community became an important element since the 5th Five Year Plan. Elementary Education, Rural Water Supply Scheme, Rural Roads, Rural Electrification, Housing, Environmental Sanitation etc. were incorporated alongwith the Rural Health Programme. In order to increase accessibility to rural health care programme, the norms for PHC, and Sub-Centres were revised and re-set at one PHC for every 30,000 population (20000 for tribal and hilly area), one Sub-Centre for every 5000 population (3000 for tribal and hilly area) and one Community Health Centre for every one lakh population with hospital and specialist-services etc. and also establishing referral services etc. With a view to achieve people's participation in health care, a new type of health volunteers was introduced following Srivastava Committee recommendations, who would be nominated by the community at the rate of one volunteer per each village or a population of 1000, trained and sent back to the community he/she belongs, to serve at the locality, rendering preventive, promotive and incidental curative services at a grass-root (village) level. They are termed Health Guides.

Thus slowly and steadily, the spirit of Bhore Committee of peoples participation in health care and placing the health services as close to the people is taking shape, after passing through various twist and turn of events of time.

New Delhi,
New Delhi,
November, 1983.

Dr. S. N. BAGCHI

I-HEALTH SURVEY AND
DEVELOPMENT COMMITTEE—1946
(BHORE COMMITTEE)

A SUMMARY OF THE REPORT

Our survey of existing health conditions in India in volume I of the report extends to about 220 pages, while the recommendations for the creation of a better standard of national health through the development of an organised health service on modern lines are embodied in a second volume of over 500 pages. In these two volumes we have dealt, at some length, with India's health problems in order to present an adequate picture of the existing state of affairs and of the proposals for its improvement. In addition to such detailed consideration of matters relating to India's present and future health administration we feel that it may be of advantage to give, in a much smaller compass, the salient features of our report in the present volume. In this summary we have not strictly adhered to the chronological order of the chapters in the first two volumes of our report. It deals with different subjects such as personal health services, environmental hygiene, professional education, medical research and so on in separate sections and indicates briefly, in each section, the more important matters relating to the subject concerned in respect of both the existing conditions and of our proposals for their improvement.

(a) THE STATE OF THE PUBLIC HEALTH IN BRITISH INDIA

1. In presenting a picture of health conditions in India we have confined ourselves to the period ending with 1941 in order to exclude the adverse effects of abnormal conditions arising out of the War, particularly after Japan's entry towards the end of that year. The present state of the public health in British India is low as is evidence by the wide prevalence of disease and the consequent high rates of mortality in the community as a whole and, in particular, among such vulnerable groups as children and women in the reproductive age period. The death rate for the general population in British India was, in 1937, 22.4 per 1,000 inhabitants and for infants (children under one year of age) 162 per 1,000 live births. In 1941 the corresponding rates were 21.8 and 158 respectively. As a contrast the following figures for New Zealand and Australia are quoted :—

	General death rate (1937)	Infantile mortality rate (1937)
New Zealand	9.1	31
Australia	9.4	38

The high rates of mortality in the community at all age periods are reflected in the very low expectation of life in India. We give below the expectations of life for new-born infants in New Zealand, Australia and British India.

	Expectation of life at birth	
	Males	Females
New Zealand	65.04	67.88 (1934)
Australia	63.48	67.14 (1932-34)
British India	26.91	26.56 (1921-30)

2. New Zealand and Australia are two of the most healthy countries in the world and the figures quoted above give an indication of what has already been achieved in reducing mortality in the community and in prolonging the life of the individual in those countries. India has to go a long way before the health of the people is raised to the standards already reached by the other countries. In all countries in which health administration has made definite progress the expectation of life for females is higher than for males. India is an exception the reason being as will be shown later, the high rate of mortality among women in this country due to causes associated with pregnancy and childbearing.

3. The rates of mortality among infants and children and among mothers are examined below in greater detail.

Deaths among infants and children under 10 years of age in British India and in England and Wales are shown below as percentages of the total deaths at all ages in the two countries.

Deaths at specific age-periods shown as percentages of the total deaths at all ages

	Under one year	1-5 years	5-10 years	Total under 10 years
British India (average for 1935-39)	24.3	18.7	5.5	48.5
England and Wales (1938)	6.8	2.1	1.1	10.0

In India, nearly half the total deaths are among children under 10 years of age and, of the mortality in this age group, one half takes place within the first year of life. The percentage for England and Wales in every age group is very much smaller.

Maternal Mortality

4. About 200,000 women die every year in British India from causes associated with pregnancy and childbearing and, probably, about four millions suffer from varying degrees of disability and discomfort as a result of the same causes.

The Incidence of Diseases

5. At least 100 million persons suffer from malaria every year, and the annual mortality for which the disease is responsible, either

directly or indirectly, is about 2 millions. About 2.5 million active cases of tuberculosis exist in the country and 500,000 deaths take place each year from this cause alone. The common infectious diseases, namely, cholera, smallpox and plague, are also responsible for a large amount of morbidity and mortality, the extent of which varies from year to year. Among the different countries of the world for which statistics are available, India ranks high as one of the largest reservoirs of infection in respect of all the three. These and the other two are all preventible diseases and their incidence should have been brought under effective control long ago. In addition, endemic diseases such as leprosy, filariasis, guinea-worm and hook-worm diseases are responsible for a considerable amount of morbidity in the country, although their contribution to mortality is relatively small.

(b) CAUSES OF THE LOW LEVEL OF HEALTH IN INDIA

6. The maintenance of the public health requires the fulfilment of certain fundamental conditions, which include the provision of an environment conducive to healthful living, adequate nutrition, the availability of health protection to all members of the community, irrespective of their ability to pay for it, and the active co-operation of the people in the maintenance of their own health. The large amount of preventible suffering and mortality in the country is mainly the result of an inadequacy of provision in respect of these fundamental factors. Environmental sanitation is at a low level in most parts of the country, malnutrition and under-nutrition reduce the vitality and power of resistance of an appreciable section of the population and the existing health services are altogether inadequate to meet the needs of the people, while lack of general education and health education add materially to the difficulty of overcoming the indifference and apathy with which the people tolerate the insanitary conditions around them and the large amount of sickness that prevails.

7. Diet surveys carried out in different parts of the country have shown, in typical urban and rural groups, that the food consumed is insufficient to provide the necessary energy requirements in the case of some 30 per cent. of the families, that the diet is almost invariably ill-balanced and that there is, in terms of food factors, a deficiency of fats, vitamins and proteins of high biological value. The statistics for food production in India show a considerable margin of error, but such figures as are available suggest that, in regard to cereals which form the staple article of diet, the deficiency may be of the order of 22 per cent. of the country's requirements. For other articles such as vegetables, fruits, milk, meat, fish and eggs, the quantities now produced will have to be increased several times before adequate amounts will become available for the proper nutrition of the people.

8. While the extent of provision of hospitals and dispensaries in urban and rural areas varies considerably among the provinces, the rural population has everywhere been less adequately provided for than the urban. The inhabitants of the rural areas live more widely dispersed than those of the urban and the medical aid given by an institution becomes to that extent more restricted. In the United Provinces, for instance, one institution serves in the rural areas an average population of 105,626 distributed over an average number of 224 villages.

9. The quality of service rendered by these institutions leaves much to be desired. For instance, the average time given to a patient was noted, during our tours, to be 48 seconds in one dispensary and about a minute in another. The medical service given to the people under such conditions is bound to be of a perfunctory nature. The medical officers in charge of many dispensaries have, for long periods, been out of touch with modern medical practice without an opportunity to work in a well conducted hospital. Other defects include unsatisfactory conditions in regard to the design of, and accommodation in, institutions, considerable overcrowding in the wards and great insufficiency of the nursing staff.

10. The number of beds available in British India for the treatment of general and special diseases is about 73,000 or about 0.24 bed per thousand population, as against 7.14 in England and Wales and 10.48 in the United States.

(c) INADEQUACY OF HEALTH PERSONNEL

11. Some idea of the magnitude of the task to be accomplished in increasing within the next 25 years, trained personnel of various type in order to provide a reasonably satisfactory health service to the people may be obtained from the following figures. We have given existing standard in the United Kingdom but have suggested for India lower ratios as the targets to be aimed at during the next quarter of a century. The reason is that the available numbers in the various categories of personnel are so small that even the attainment of the suggested ratios by 1971 will involve concerted; intensive and unremitting effort, on an unprecedented scale, by the authorities concerned.

Class of Personnel	Number available now	Ratio of numbers in column 2 to the present population of British India (300 millions)	Existing ratio in the United Kingdom	Suggested ratio to be attained in 1971 in British India with an estimated population of 370 millions	Number required in 1971
Doctors	47,500	1 to 6,000	1 to 1,000	1 to 2,000	185,000
Nurses	7,000	1 to 43,000	1 to 300	1 to 300	740,000
Health Visitors	750	1 to 400,000	1 to 4,770*	1 to 5,000	74,000
Midwives	5,000	1 to 60,000	1 to 618†	1 per 100 births.	100,000
Qualified Pharmacist.	75	1 to 4,000,000	1 pharmacist to 3 doctors	1 pharmacist to 3 doctors	62,000
Qualified Dentists.	1,900	1 to 300,000	1 to 2,700	1 to 4,000	92,500

*Based on 1935 figure.

†Based on 1943 figure.

RECOMMENDATIONS

12. We have indicated above certain dark shadows in the health picture of the country. If it were possible to evaluate, with any degree of exactness, the loss India suffers annually through avoidable waste of human material and the lowering of human efficiency through malnutrition and preventable morbidity, the result would be so startling as to arouse the whole country and create and enlist an awakened public opinion in support of the war against disease. According to one authority the minimum estimate of the loss to India every year from malaria alone lies somewhere between 147 and 187 crores of rupees. A nation's health is perhaps the most potent single factor in determining the character and extent of its development and progress and any expenditure of money and effort on improving the national health is a gilt-edged investment yielding immediate and steady returns in increased productive capacity.

13. In drawing up a health plan certain primary conditions essential for healthful living must in the first place be ensured. Suitable housing, sanitary surroundings and a safe drinking water supply are pre-requisites of a healthy life. The provision of adequate health protection to all covering both its curative and preventive aspects, irrespective of their ability to pay for it, the improvement of nutritional standards qualitatively and quantitatively, the elimination of unemployment, the provision of a living wage for all workers and improvement in agricultural and industrial production and means of communication, particularly in the rural

areas, are all facets of a single problem and call for urgent attention. Nor can man live by bread alone. A vigorous and healthy community life in its many aspects must be suitably catered for. Recreation, mental and physical, plays a large part in building up the conditions favourable to sound individual and community health and must receive serious consideration. Further, no lasting improvement of the public health can be achieved without arousing the living interest and enlisting the practical co-operation of the people themselves.

MODERN TRENDS IN THE ORGANISATION OF A NATIONAL HEALTH SERVICE

14. A study of the tendencies apparent in some of the more progressive countries of the world in the development of organised health services for the community has been of great assistance to us. Broadly speaking, the modern trend is towards the provision by the State of as complete a health service as possible and the inclusion, within its scope, of the largest possible proportion of the community. The need for ensuring the distribution of medical benefits to all, irrespective of their ability to pay, has also been recognised. The general tendency appears to be towards basing the national health plan on a system of social insurance. Even in Soviet Russia, where medical care is free to all, the cost of the services is partly met from insurance funds, contributions towards these funds being made not by individual workers but by the factories and other institutions in which they work. We have come to the conclusion that, under the conditions existing in the country, medical service should be free to all without distinction and that the contribution from those who can afford to pay should be through the channel of general and local taxation. It will be for the Governments of the future to decide ultimately whether medical service should remain free to all classes of the people or whether an insurance scheme would be more in accordance with the economic, social and political requirements of the country at the time.

15. Taking into consideration the need for ensuring adequate health service for the vast rural population of the country and the difficulty experienced in the past in attracting medical practitioners to the countryside, we have come to the conclusion that the most satisfactory method of meeting the situation would be to provide a whole-time salaried service, which would enable Governments to ensure that doctors are made available where their services are most needed. This conclusion is supported by the evidence of a number of representatives of medical associations, of private individuals and several medical administrators.

16. We have also come to the conclusion that the wholetime salaried doctors employed by the State should be prohibited private practice. In our scheme the same doctor will combine in himself,

at the periphery, curative and preventive health functions and it seems almost certain that, without the prohibition of private practice, his preventive duties will not receive the attention they require. As regards medical relief, there was a general agreement among those whom we interviewed that prohibition of private practice was essential in order to ensure that the poor man in the rural areas received equal attention with his richer neighbour. We have therefore recommended the prohibition of private practice to the full-time salaried doctors employed by the State and have, at the same time, suggested scales of pay which, we believe, will provide reasonably adequate remuneration for the services they render.

17. The utilisation of the services of suitable medical men outside the health service on a part-time or even on an honorary basis will also be advantageous and even necessary, particularly in the earlier stages of our health programme. In the cities and some of the larger towns in the country, general practitioners with high qualifications and specialists are available for such employment.

THE HEALTH PROGRAMME

18. We have drawn up our health plan in two parts, one a comprehensive programme for the somewhat distant future and the other a short-term scheme covering two five-year periods. We have taken the countryside as the focal point of our main recommendations, for the debt which India owes to the tiller of the soil is immense. When pestilence and famine sweep through the land, it is he who pays the heaviest toll and yet receives only the scantiest medical assistance. Further, nearly 90 per cent. of the people in India live in the rural areas and the basic problem before the country is the provision of adequate health protection to this preponderatingly large section of the community. We have therefore made the villager the chief beneficiary under our proposals.

19. We shall first refer briefly to our proposals under the long-term programme and then set out those which are recommended for each of the two five-year periods, which constitute the short-term programme. In doing so we shall take up first the district health organisation in respect of each programme. The machinery for the organisation and administration of the health services at the Centre and in the Provinces constitutes an integral part of both the long and short-term proposals and it will be described later.

THE LONG-TERM PROGRAMME

20. The large variations that exist in the density of population in different parts of the country make it impossible to formulate a plan which can be applied without modification over all the provinces. The desirability of associating the activities of the proposed

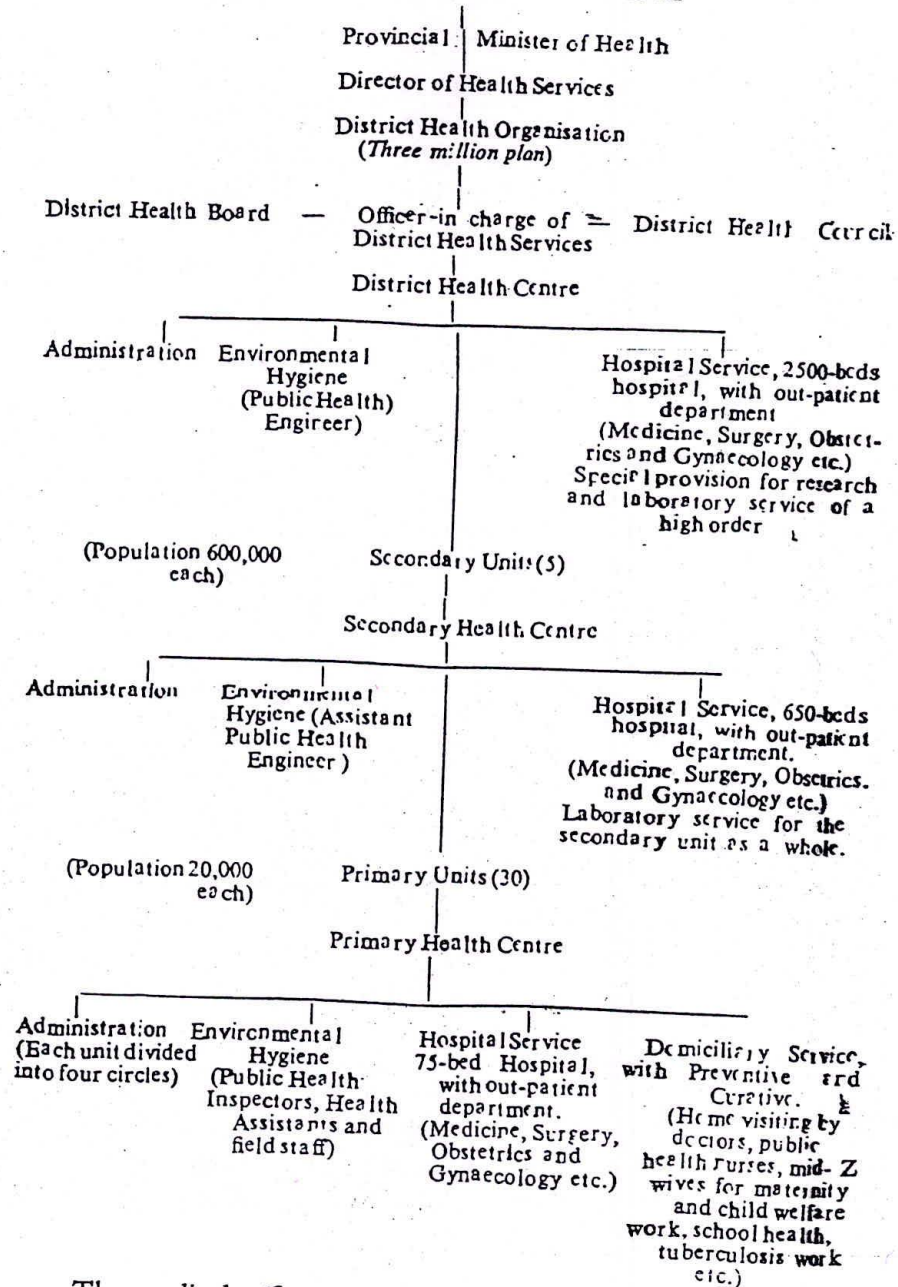
health organisation with those of other Departments of Government such as Agriculture, Education, Animal Husbandry and Cooperation has been recognised and it is, therefore, considered advantageous that, as far as possible, the administrative district should be chosen as the area for the development of the scheme. The populations of individual districts vary considerably from over five millions to a few hundreds of thousands or even less in some cases and therefore,—in presenting the plan, an arbitrary figure of three million for a district has been chosen. For the sake of convenience it will be referred to as the three million plan. In implementing the proposals the details that are given will have to be modified in the provinces so as to suit the size and population of their individual districts.

THE THREE MILLION PLAN

21. The district health organisation will have as its smallest unit of administration the primary unit, which will normally serve an area with a population of about 10,000 to 20,000. A number of such primary units (about 15 to 25) will together constitute a secondary unit and a varying number of the latter (about 3 to 5) will form the district health unit, the designation by which the district health organisation will be known. At each of the headquarters of the district, secondary and primary units will be established a Health Centre as a focal point from which the different types a health activity will radiate into the territory covered by each type of unit. The District Health Centre will possess general and special hospitals with a total bed strength of about 2,500 and all the consultant and laboratory services required for the diagnosis and treatment of disease on up-to-date lines. The administrative staff of the district health organisation will be located here and will exercise supervision over the district as a whole. Similarly, the Secondary Health Centre will be provided with hospital accommodation of about 650 beds and with equipment and other facilities on a generous scale, although not up to the standard of the District Health Centre. The administrative staff of the secondary unit will be attached to the Secondary Health Centre and will exercise supervision and control over the primary units included in it. The Primary Health Centre will have a 75-bed hospital and health administration over the area included in the primary unit will radiate from this Centre.

22. The district health organisation described above and its functions are shown below in diagrammatic form:—

LONG TERM PROGRAMME



The medical officers in charge of the Departments of Medicine, Surgery etc, in the hospital at the Secondary Health Centre will, in addition to their hospital duties, supervise work in their respective fields in the hospitals in the primary units and the corresponding staff in the hospital at the district headquarters will

similarly supervise the work of the different departments in the secondary and primary health centre hospitals. Close and continuous guidance through advice and supervision, which should extend even to the remote villages, is fundamental to the success of the scheme and the administrative staff at the District and Secondary Health Centres will carry out this task in the different fields of health administration.

THE PRIMARY UNIT

23. Each primary unit will have six medical officers, six public health nurses and a 75-bed hospital with the requisite nursing staff, and all these should be utilised for organising a combined curative and preventive health service in the area. Over and above the hospital nursing staff there are provided six public health nurses, who should be qualified nurses with training in midwifery and, in addition, in rural health work in its preventive and remedial aspects. Of these, four may be put on to preventive work in the homes of the people. Each nurse so engaged should be able to deal with the health of school children, the welfare of mothers and children, tuberculosis work and other activities in the houses within her area of jurisdiction. The remaining two public health nurses and two medical officers will be available for organising and carrying out curative treatment in the homes of the people.

THE SECONDARY UNIT

24. The staff employed in a secondary unit will be considerably larger than that of a primary unit. The Administrative Officer at the headquarters of the secondary unit will be responsible for the supervision and co-ordination of all curative and preventive health work in the whole area supervised by the secondary unit. There will be whole-time heads of the different departments of medicine, surgery, maternity, tuberculosis and pathology at the secondary unit hospital and they will perform the dual function of attending to the duties of their respective sections in the hospital and of inspecting periodically similar work carried on in the primary unit hospitals.

25. In addition to these, the secondary unit provides for two senior public health nurses and two senior sanitary inspectors who will be responsible for supervising the work of the corresponding officers in primary units. There is also an Assistant Public Health Engineer for supervising all activities in connection with environmental hygiene throughout the area controlled by the secondary unit.

THE DISTRICT HEADQUARTERS ORGANISATION

26. The provision for medical relief at the district headquarters is on a much larger scale than at a secondary unit. The number of beds in the hospital is 2,500 and the number of medical

officers and other personnel employed are considerably greater than in a secondary unit. The provision of 2,500 beds need not necessarily be made in one large institution. These beds include provision for medical, surgical, obstetrical and gynaecological cases as well as for patients suffering from infectious diseases, mental diseases, tuberculosis and others. A number of institutions can be grouped together conveniently in the same area in order to provide the required facilities.

27. The secondary unit and district headquarters hospitals, with their better equipment and superior type of medical personnel, will be the institutions to which the more complicated cases admitted in the primary unit hospitals will be removed. The provision of ambulances and telephone connection between all the three types of hospitals are essential for ensuring that these institutions are utilised to the largest possible extent.

28. At all the three types of hospitals (primary unit, secondary unit and district headquarters hospitals) social workers are to be employed. Their functions include, among other things, the visiting of the home of the patient in order to ascertain the causes underlying the disability for which he or she has sought the aid of the hospital and service as a connecting link between the hospital and the public in the treatment of the individual patient and the general health programme of the area concerned. Under our programme the treatment of disease has been approached not merely from the standpoint of affording the patient immediate relief but also from that of attempting to remove the causes which are responsible for his condition.

29. The health organisation briefly described above is expected to produce a reasonably satisfactory service for rural and urban communities alike. It is based mainly on a system of hospitals of varying size and of differing technical efficiency. These institutions will play the dual role of providing medical relief and of taking an active part in the preventive campaign. Work in connection with maternity and child welfare, tuberculosis, leprosy, etc., will be carried into the homes of the people from the hospitals, the outdoor organisations in respect of each of them being closely related to these institutions. The diagnostic facilities that the large hospitals will provide will also contribute their share to the preventive campaign. The social workers attached to these institutions will help to provide that preventive bias to the treatment of individual patients, in the absence of which the medical care bestowed on them may fail to produce lasting results.

30. By the time the long-term programme is completed the hospital accommodation available in the country will have risen from the present figure of about 0.24 bed per 1,000 of the popula-

tion to 5.67 beds per 1,000. As regards health personnel, the numbers that will be required under certain categories and those now available are shown below:—

	Numbers required for the complete programme	Numbers now available
Doctors	233,630	47,500
Nurses (including public health nurses) .	670,000	7,500 (including existing health visitors).
Midwives	112,500	5,000
Pharmacists	77,880	75

Is such a large increase in the numbers of the health personnel possible? An example of an unparalleled expansion of health personnel is furnished by Russia. In 1913 there were altogether 19,785 doctors in that country. By 1941 the number had risen to 141,600, an increase of seven times within a period of 28 years. In India the increase required under these proposals is only about five times the existing number of doctors, to be achieved in a longer period.

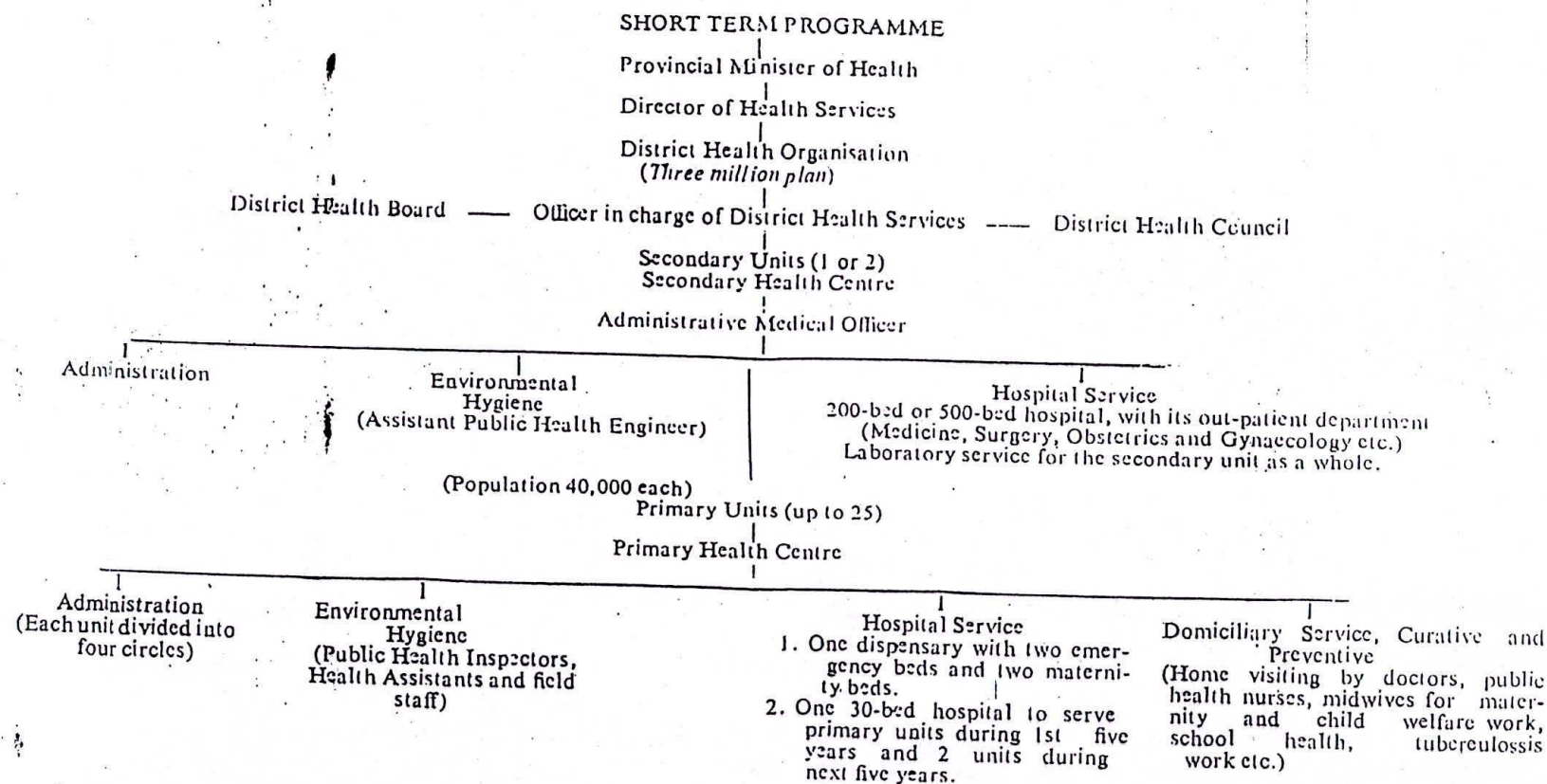
THE SHORT-TERM PROGRAMME

31. Our short-term proposals, which are intended to supplement and not supplant the existing health services, do no more than present a general picture for the guidance of the Provinces. They constitute, in our view, the irreducible minimum if tangible results are to be produced. The plan includes proposals for the establishment of personal and impersonal health services. Under the former head we propose a province-wide organisation for combined preventive and curative health work. This will provide, for each district, (1) a number of primary and secondary units which are included in the district health unit and (2) special health services for mothers and children, school children and industrial workers as well as for dealing with the more important diseases prevalent in India, such as malaria, tuberculosis, venereal diseases, leprosy, mental diseases, and some others. The three important subjects of nutrition, physical education and health education have been dealt with in separate chapters in volume II of our report. Our recommendations regarding impersonal health services relate to town and village planning, housing, water supply, drainage and other matters regarding general sanitation. Specific proposals for the training of doctors, nurses and other categories of health personnel, for medical research and certain other important matters have also been made.

THE PROVINCE-WIDE HEALTH ORGANISATION

32. While the outlines of the general plan of the district health organisation will follow those indicated for the long-term programme the plan will be less elaborate. We suggest that, in view of the insufficiency of funds and of trained personnel, each primary unit should cover, during the first ten years, a population of 40,000, that the primary health centre should have a dispensary with two beds for maternity and two for emergency cases instead of a hospital and that the secondary health centre should start with a 200-bed hospital to be raised, by the tenth year, to 500 beds. We also suggest that the establishment of the district health centre may be postponed till after this period. The staffing and equipment of the health centres at the headquarters of the primary and secondary units will be on a reduced scale. In order to expand the existing meagre hospital facilities in rural areas we also suggest that a 30-bed hospital should be established, at the start to serve four primary units, and that, by the end of the first ten years, their number should be doubled so that one such hospital will serve two primary units.

33. The district health organisation suggested for the short-term programme and its functions are given below in diagrammatic term :



In the short-term programme the establishment of the organisation at the district headquarters is not contemplated the administrative and supervisory functions exercised by the staff at the Secondary Health Centre will be on the lines indicated for the long-term programme.

34. The district health organisation should, from the start, be established in every district in a province. This organisation should begin with five primary units and one secondary unit and these should be gradually increased to 25 primary and two secondary units at the end of the first ten years. The following tabular statement indicates the expansion we suggest for the health organisation in a typical district:—

Expansion of the scheme in a typical district

	First year	Fifth-year	Tenth year
Number of primary units	5	10	25
Number of dispensaries	5	10	25
Number of 30-bed hospital	1	2	13
Number of secondary units	1	1	2
Number of 200-bed hospitals	1	1	1
Number of 500-bed hospitals	1

Starting with about a seventh of the average population of a district in British India the proposed health organisation will, it is expected, serve half the population of individual districts by the end of the first ten years.

The Primary Unit

35. The primary health centre at the headquarters of the primary unit will be the focal point from which will radiate the various health activities contemplated in our programme. For each unit the staff required during the short-term programme will consist of 2 medical officers, 4 public health nurses for outdoor duty, 1 nurse attached to the dispensary, 4 midwives, 4 trained *dais* (as an *interim* measure till a sufficient number of midwives becomes available, 2 sanitary inspectors, 2 health assistants, 2 clerks, 1 mistry, 15 inferior servants and 1 pharmacist. This staff, with the exception of the public health nurses, midwives and trained *dais*, should be stationed at the headquarters of the primary unit, although their duties will extend over the whole area covered by the unit. The public health nurses, midwives and trained *dais* will be located at different places so as to make their services promptly available, wherever required.

36. We consider that the health programme in India should be developed on a foundation of preventive health work and proceed in the closest association with the administration of medical relief. A reduction in the demand for curative treatment can be

secured only through successful preventive work. Both the doctors in the primary unit should therefore perform curative and preventive health duties.

37. We have placed maternity and child welfare work in the forefront of our programme. Attention has already been drawn to the large number of preventable deaths, which occurs annually among children under 10 years of age and among women in the reproductive age period as the result of causes associated with pregnancy and childbearing. The supreme importance of dealing immediately with this section of the population is therefore obvious. Further, a progressive improvement of the public health depends largely on promoting the hygienic mode of life among the people by educating them towards this end. This education should be carried out intensely among women and children in order to produce lasting results. The women doctor, the public health nurse and the midwife can carry the message of health to the homes of the people through their numerous contacts with women and children.

38. In the beginning the country will be faced with the necessity of providing, in many directions, services manned by imperfectly trained personnel with the ability to perform only limited functions. For instance, in order to promote school health work, selected school masters with limited training in the carrying out of certain duties will have to be utilised in the place of doctors and nurses until the latter become available in sufficient numbers. These teachers will work under the close supervision of the two doctors in charge of the primary unit in order to ensure that they carry out their duties satisfactorily.

39. [No permanent improvement of the public health can be achieved unless the active participation of the people in the local health programme can be secured. We have therefore suggested the establishment, in each village, of a Health Committee consisting of five to seven individuals, depending on the size and population of the village. The members of the committee, who will of course be voluntary workers, can, after suitable training, help to promote specific lines of health activity. Their local knowledge and intimate contact with the people should enable the members of the committee to influence the former to accept and actively advance the health measures which are designed to promote the public welfare. The committee members should also be able to promote local effort, without payment, towards the carrying out of many measures which would otherwise prove prohibitive in cost. We consider that the development of local effort and the promotion of a spirit of self-help in the community are as important to the success of the health programme as the specific services which the health officials will be able to place at the disposal of the people.]

The Secondary Unit

40. From the very start, a secondary unit should be established in each district. The secondary health centre which will be established at its headquarters, will help to provide a higher type of medical service than that available in primary units as well as supervision and guidance of the health activities in these units. When fully developed, a secondary unit may be expected to cover an area with an average population of about 600,000. In order to co-ordinate health administration with the activities of other departments of Government, it will be of advantage if the area of a secondary unit can be made to correspond to that of a sub-division in the district.

HOSPITAL PROVISION

41. The anticipated numbers of new institutions in the 11 Governors' Provinces at the end of the first six years and of the first ten years respectively are shown below :—

	No. of dispensaries with four beds in each	No. of 30-bed hospitals	No. of 200-bed hospitals	No. of 500-bed hospitals
End of the first six years	2,293	639	216	<i>Nil</i>
End of the ten year period	3,905	1,990	216	139

42. In addition there will be separate hospital provision for tuberculosis, mental diseases and leprosy. The existing number of hospital beds in British India is about 73,000 and, with the proposed new provision, the total accommodation expected at the end of the first five and first ten year periods will be as follows:—

At the end of the first five years—Approximately 183,000.

At the end of the first ten years—Approximately 353,000.

This programme of hospital expansion will raise the existing ratio of bed to population in the manner shown below:—

Beds per 1,000 population

At present	End of five-year programme	End of ten-year programme
0.24	0.55	1.03

As has already been pointed out, existing provision for hospital accommodation in England and Wales is 7.14 per 1,000 of the population and in the United States 10.48 per 1,000.

DENTAL SERVICE

43. It will not be possible to develop even the beginnings of a dental service during the first five years of the programme because of the total inadequacy of existing dental personnel. If our scheme of dental education should proceed satisfactorily it would be possible to organise dental service on a modest scale during the next five years. Our proposals include the establishment of dental sections in the 500 and 200 bed hospitals at the secondary health centres as well as the provision of travelling dental units for service in the rural areas. If the programme is completed on the lines envisaged by us there will be, at the end of the first ten years, 139 hospitals with 500-bed accommodation and 216 hospitals with 200 beds in each. The number of mobile dental units will be 710.

44. Reference should also be made to certain other matters which we consider to be of great importance from the point of view of ensuring the success of the health programme we have recommended. They are briefly dealt with below.

Housing Accommodation for the Health Staff

We consider the provision of housing accommodation for the health staff essential in the interests of efficiency. Every health administrator is today faced with the problem of persuading doctors to settle in the villages. The absence in the rural areas of the amenities generally available in towns, including housing and water supply, is one of the factors retarding the flow of doctors from urban to rural areas. The same tendency is noticeable, though to a smaller extent, in respect of other types of health personnel. In the circumstances we consider the provision of housing is fundamental to the success of our scheme.

Co-operation of the Health Services with other Departments of Government

The national programme of reconstruction should be developed on a broad front and, simultaneously with the inauguration of the health scheme, the reconstruction plans of other Departments of Government should be brought into operation in the same area.

Village Communications

We must emphasise the vital importance of developing village communications in order to enable the health organisation to offer efficient service to the people. Without such development our whole plan for the rural areas may either be paralysed or lose the greater portion of its effectiveness. Further, the economic welfare of the village population largely depends on the develop-

ment of rural communications and we stress the need for giving high priority to such development.

Ambulance

The provision of ambulances for the transport of patients is an important factor in the improvement of the efficiency of the health services. For each 30-bed hospital two motor ambulances and one animal-drawn ambulance have been provided in our scheme.

Travelling Dispensaries

In the sparsely populated parts of individual provinces it will be advantageous to provide travelling dispensaries to supplement the health services rendered by the primary health centres.

Utilisation of the Buildings, Equipment and Personnel made available from the Army after the War

The needs of a modern Army have brought into existence a number of health services and the personnel, equipment and buildings connected with these can, in many cases, be utilised in the development of our health programme. Anti-malaria units, hygiene squads, hospitals constructed for war purposes, military camps, large airfields with such amenities as roads, water-supply and lighting, motor vehicles of various types, should all be made available, on easy terms, for the purpose of developing the health programme.

Delhi Province as a Demonstration Area

Some of us are of the opinion that Delhi Province is particularly suitable for being made a demonstration area by implementing here our proposals as well as those of other Committees which have put forward schemes for post-war reconstruction.

Objectives for the Third Five-year Term

45. While the proposals outlined above relate to the first ten years of the health programme, certain broad suggestions are put forward as the objectives to be kept in view for the third five-year term.

- (1) Hospital accommodation to be raised to 2 beds for every one thousand of the population.

At the end of the first ten years our scheme provides for one bed per 1,000 population.

- (2) Expansion of the scheme so as to cover three-quarters of the population of individual districts, wherever possible.
- (3) The creation of 12 new colleges in addition to the 43 to be established during the first 10 years.

- (4) The establishment of a fourth set of 100 training centres for nurses.
- (5) The training of 500 hospital social workers.*

ORGANISATION AND ADMINISTRATION

46. On the administrative side we propose :—

- (1) a Ministry of Health at the Centre;
- (2) Ministries of Health in the Provinces; and
- (3) local area health administrations.

We consider it fundamental that the portfolio of health at the Centre and in the Provinces should be in charge of a separate Minister, so as to ensure his undivided attention being given to the development of the future health programme. The need for developing the health services in the closest possible co-operation of the people has already been stressed. Both in respect of legislation and of administration it is likely that some of the measures to be undertaken will offend existing social and religious practices. A Minister, who enjoys the confidence of the people and can secure their co-operation, can alone carry such enactments through the legislature and enforce their working in the country.

47. After giving careful consideration to the question of the existing distribution of health functions between the Centre and the Provinces and to the large measure of autonomy that the latter enjoy under the Government of India Act of 1935, we have come to the conclusion that certain principles should be taken into consideration in formulating plans for future development. These principles are :—

- (a) That the wide measure of autonomy that has been granted to the Provinces should be respected to the utmost possible extent. Our proposals for the future will

*Drs. Vishwa Nath and Butt foresee that diarchical conflicts will arise out of the application of these proposals for medical relief in the districts. In their view the existing machinery of medical relief, however inadequate and unsatisfactory, is not ill-suited to furnish the foundations for evenly spread improvements. They advocate as even a distribution of facilities accruing from increased personnel, accommodation and equipment, as the requirements of special institutions, geography and density of population may permit. On the other hand the others consider that, if the suggestion of these two colleagues is accepted, the result may be a congeries of unplanned accretions to the existing organisations for medical relief and preventive health work and that one of the fundamental purposes underlying the health plan put forward in the report will not be fulfilled. The scheme is intended to promote, from the beginning, the development of remedial and preventive health work on a unified basis as well as to provide an integrated institutional and domiciliary service to the people. The existing curative and preventive health services are, on the other hand, functioning independently of each other with unsatisfactory results. In all progressive countries the requirements indicated above are considered as essential features of a modern health organisation. For these reasons the majority consider that the suggestion of Drs. Vishwa Nath and Butt would destroy the essential requirements of the Committee's plan.

make for considerable changes in existing health administration and professional education and we therefore feel that, in carrying out these recommendations, the closest possible co-operation between the Centre and the Provinces will be essential. In order to minimise friction and to promote mutual consultation between the Centre and the Provinces in the formulation of health policy and its implementation, there should be established a Central Statutory Board of Health consisting of the Central and Provincial Ministers of Health. The Centre, with its larger resources in money and technical personnel, should help the Provinces with grants-in-aid for the development of their health programmes and with such technical assistance as may be required. One of the important functions of the Board will be that of making recommendations to the Central Government regarding the distribution of grants-in-aid.

In our view the co-operation that may be expected to develop, as the result of these proposals, between the Central and Provincial Ministers of Health on the one and between their administrative and technical staff on the other should create a firmer foundation for the harmonious development of the health programme over the country as a whole than a reversal of the policy of decentralisation and a resumption of powers by the Centre to regulate and control development in the Provinces. We recognise that there will be certain exceptional circumstances in which the Central Government should have power to interfere in Provincial administration. It is, however, to be expected that the machinery for consultation and co-operation, which has been suggested above, should help to reduce these occasions to the minimum. We believe that a Centre acting with sympathy and imagination may well be able to hasten the pace of progress in the provinces by promoting a spirit of healthy competition among them in their task of providing progressively higher standards of health administration in their respective areas.

- (b) The Ministry of Health, Central or Provincial, should be the ultimate authority responsible for all the health services operating within its jurisdiction and should have power to lay down and enforce minimum standards of health administration for those services which are within the immediate control of other department (e.g., railways, prisons, labour, etc.)
- (c) There should be the closest possible co-operation between the Ministry of Health and other departments of

Government in order to promote the pooling of all the available facilities, curative and preventive, in the interests of efficiency and of economy.

- (d) The Ministries of Health, Central and Provincial, should have the advice and guidance of technical experts in the planning and maintenance of their health services. As has been pointed out in the White Paper recently issued by the Ministry of Health in England embodying proposals for a national health service, "the provision of a health service involves technical issues of the highest importance and in its administration, both centrally and locally, there is room for special devices to secure that the guidance of the expert is available and does not go unheeded." We recognise the need for such technical guidance and have therefore incorporated in our proposals a recommendation for the creation of standing councils of experts at the three levels of Central, Provincial and local area administrations. These councils will consist of representatives of the medical, dental, nursing and other professions.

Functions of the Central and Provincial Governments

48. The main functions which we have recommended for the Central and Provincial Governments are broadly those for which they are responsible at present under the Government of India Act, 1935. In addition we have suggested that the Centre should take a definite lead in planning and promoting the development of health services, preventive and curative, in the country as a whole. Provincial activities in the field of health should be assisted and co-ordinated by the Centre through a system of grants-in-aid of approved schemes in the provinces and of technical assistance, where desired. Control of inter-provincial spread of communicable diseases, the sanitary control of inter-provincial traffic and the enforcement of standards regarding food and drugs in inter-provincial commerce should also be important functions of the Central Government.

In certain exceptional circumstances, the Centre should have power to take direct action in a province in the interests of the country as a whole. Such intervention should, as far as possible, be after consultation with the proposed Central Board of Health and, in cases requiring urgent action before such consultation could take place, the matter should be brought to the notice of the Board with the least possible delay.

49. We have recommended the establishment in the provinces, of Provincial Health Boards and of Provincial Health councils with composition and functions similar to those of the Central Board and Central Council.

Central and Provincial Health Services

50. The principal technical adviser to the Minister of Health will be the Director General of Health Services at the Centre and the Director of Health Services in a Province, who will function in each case as the single administrative officer for the curative and preventive departments of health. These officers will be assisted by a suitable number of Deputy and Assistant Directors General or Directors as the case may be, who will be in charge of different functions.

Recruitment and Control of the Central and Provincial Health Services

51. The following principles should, we recommend, guide the authorities concerned with the recruitment and control of the future Central and Provincial Health Services in India:—

- (1) There should be separate and independent Central and Provincial health services appointed and controlled by the Central and Provincial Governments respectively, the venue of recruitment for both being India. Recruitment to these services will be restricted to persons living in India except in the case of a small number of posts in connection with teaching and research institutions, for which it may be necessary to obtain suitable persons from outside the country. Such persons should be recruited from abroad on short-term contracts, every effort being made within the period of the contract to train a suitable Indian for the post.
- (2) Appointments to posts in the teaching and research institutions should be made purely on merit. One-third of the general health service posts should also be filled on merit. In filling up the remaining posts consideration may be given to the need for communal representation, every community being given its share of the $66\frac{2}{3}$ per cent in accordance with the proportions laid down by the Governments concerned. Of the candidates from individual communities the best available should be chosen. After admission into the health services promotion to higher posts should be regulated solely by merit.
- (3) To secure opportunities for wider experience there should be exchanges of officers between the Centre and the Provinces to be arranged by mutual agreement.
- (4) A proportion of the posts in the Provincial Cadres should have the same salary and status as in the Central service, so that the exchange suggested above may be facilitated.

- (5) The Central and Provincial Services should be maintained as purely civil organisations.
- (6) All members of these services should have opportunities of gaining experience of both urban and rural health work.
- (7) There should be no reservation of posts under the Central or Provincial Governments for the civil branch of the Indian Medical Service.*

Health Administration in Local Areas

52. We envisage a comprehensive health service, the success of which will mainly depend upon the fulfilment of the following conditions : (a) recruitment of the staff and the conditions of service should be on similar lines throughout the province so as to permit of the enforcement of fairly uniform standards of performance over the whole area and (b) there should be continuous and effective supervision by the higher technical staff over the work of the health personnel even in remote villages.

53. District Health Board.—These conditions can be fulfilled only by a health service maintained by a single authority and not through a number of separate services controlled by different local bodies.. At the same time it is essential to associate the public with the formulation of health policy and with its implementation. We therefore recommend that, so far as health is concerned, in the place of the existing multiplicity of local health authorities with their separate staffs there should be a single health authority over the whole area operating through a unified executive staff. This authority may be designated the District Health Board and its jurisdiction will, in due course, extend over the district as a whole.

54. We consider, however, that the deprivation of the health functions exercised by local bodies should be limited only to such as are in our opinion unlikely to be able to maintain the standard of service we have recommended. We therefore suggest that certain large municipalities such as Calcutta, Bombay, Madras and Karachi, which are governed by their own Acts, as well as other municipalities having a population of at least 200,000, which may be considered by the Provincial Government as being in a position to maintain an independent health service of the required technical efficiency, may be excluded from the jurisdiction

*In the place of a Central Ministry of Health Drs. Vishwa Nath and Butt propose a Central Board of Health with a Technical Secretariat discharging specific functions. Their views on the recruitment of the health services are also different from those set forth above. Their views and our observations on them are given in paras. 27—31 of Chapter XVII of Volume II of the report.

of the District Health Board. All these large municipalities should develop and maintain health organisations on the lines suggested by us.

55. In the early stages of the programme only limited areas in each district will be brought within the operation of our scheme. In these areas there will be, as shown above, a unified health authority with a provincialised health service covering all categories of personnel. For the areas outside our scheme we recommended that, in order to secure an improvement of the health administration of existing local bodies, certain legal and administrative measures which have been taken in the province of Madras should be applied in other provinces also.

56. We have suggested that representation of the people on the Board should be partly secured by direct election by the people and partly by election, from their own ranks, by the local bodies in the areas covered by our scheme. We have also suggested, that, following the lines laid down in the Madras Public Health Act, 1939, every municipality included in the area under our scheme should be required statutorily to contribute to the District Health Board not less than 30 per cent. of its income from all sources other than Government grants and that every District Board or panchayat should similarly contribute not less than $12\frac{1}{2}$ per cent. of its income from such sources. Obviously the actual amount of the contribution in each case will depend on the proportion of the population under the local body concerned, which is brought within our scheme. Such contributions and any grants sanctioned by the Provincial Government will constitute the funds to be administered by the Board.

57. While the Board will enjoy a large measure of autonomy in order to ensure that local opinion in the district is permitted to influence health policy, it is essential that the Provincial Minister of Health should have the power of ensuring compliance by the Board with the general policy laid down by him. We have also recommended that certain legal provisions that exist in the Province of Madras enabling the Chief Administrative Officer of the Public Health Department to recommend specific action by local health authorities in particular directions for the improvement of public health and to enforce the carrying out of such recommendations, subject to the concurrence of the Provincial Government, should be made applicable to all the areas under our scheme.

Recruitment and Control of the District Health Service

58. After giving careful consideration to the question as to whether the recruitment and control of the district health service should rest with the Provincial Government or with the District

Health Board concerned, we have come to the conclusion that the balance of advantage is heavily in favour of the provincialisation of this service. In our view, such provincialisation should extend over all the posts in the district health organisation because, if a certain number of the more responsible posts are provincialised and the others are left under the Board, the resulting dual control must, we believe, lead to inefficient administration.

59. The district health organisation will be in charge of an officer to be designated the Officer in charge of the District Health Service. Under our proposals he will be a Provincial Officer whose services are lent to the Board. He should be responsible for carrying out the health policy laid down by the Board and we recommend that he should be its Secretary. This officer will be removed by the Provincial Government if a recommendation to that effect is passed by the Board by a two-thirds majority, taking into consideration its full strength.

District Health Council

60. We have already recommended the creation of a District Health Council consisting of representatives of different professions (e.g., those of doctors, dentists, pharmacists, nurses etc.) from the registered members of which the health service will be recruited. The functions of the Council will correspond to those of the Provincial and Central Health Councils. We recommend that the Officer in charge of the District Health Service should be the Chairman of this Council *

Salaries

61. We have given considerable thought to the question of the scales of pay to be proposed for the health staff. Obviously the country cannot afford rates of remuneration which are out of all relation to its national income and are higher than those which economic conditions demand. Further, too generous a provision on salaries may well wreck or at least greatly handicap the implementation of any large scale health programme. The question of salaries, moreover, is not one which concerns medical and public health personnel alone. The necessity for establishing some measure of parity between the various Provinces in the matter of the salaries of their public health staff has been strongly impressed on us by a Provincial Minister of Public Health. Another important consideration, in determining the scales of pay, is

*Mr. P. N. Saprú holds views which are different from those of the other members regarding the constitutional aspects of certain of the proposals outlined above as well as the suggestion for a modification of the existing form of local health administration. His views are embodied in two minutes of dissent which are appended to Chapter XVII of Volume II of the report. Our reply to his remarks regarding local self-government will be found in paras. 58-61 of the same chapter.

that of the competitive attraction provided by non-State employers. In the circumstances we feel that the subject is of such complexity and importance as to require comprehensive examination at the hands of an ad hoc all-India Committee which should include medical men. The results of such examination will be of the utmost value to the Central and Provincial Governments. We have, therefore, recommended the establishment of such a Committee. For the purpose of estimating the cost of our proposals we have either adopted existing rates or assumed scales of pay which appear to us *prima facie* to be generally not unreasonable.

THE NUTRITION OF THE PEOPLE

62. The national health campaign is concerned not only with the prevention of disease but also with the development of a healthy and vigorous population and improved nutrition plays a vital part in preventing sickness and in promoting positive health.

63. Under-nutrition and malnutrition exist widely in the country. According to the Director, Nutrition Research Laboratories, Coonoor, an insufficient and ill-balanced diet giving only about 1750 calories per day (as against the needed 2400 to 3000 calories) is typical of diets consumed by millions in India. Apart from inadequate nutrition being responsible for a lowering of the general standard of health of the individual, continued insufficiency of certain food factors in the diet will produce specific forms of disease. Such disease are prevalent, to a varying extent, in different parts of the country. For instance, *beri beri* is not uncommon among adults and infants in the Northern Circars of the province of Madras, osteomalacia and rickets are prevalent in certain parts of Northern India, keratomalacia is a common cause of blindness in South India and goitre is not infrequent among the communities living in some parts of the Himalayan and sub-Himalayan regions.

64. The main defects of the average Indian diet are an insufficiency of proteins, mineral salts and vitamins. A general raising of dietary standards throughout the country is basically an economic problem, the solution of which depends on the scientific development of agriculture, animal husbandry and fisheries and the simultaneous development of industrial resources. We consider that food planning should have, as its ultimate objective, "the provision of an optimum diet for all, irrespective of income, and plans should be laid to reach the objective by forced marches, stage, by stage, within a specified period of time."

65. As the average Indian diet is inadequate in respect of the quality and quantity of the protein consumed, one of the

most urgent needs is the raising of protein consumption to the required level. Proteins of high biological value are of animal origin. A certain proportion of the protein consumed each day should be proteins of this type. We shall deal with three articles of food in this connection, namely, milk, fish and food yeast. Urea as a cattle feed deserves consideration in connection with increasing the availability of meat and its production will also be referred to briefly.

Milk.—The Director of Nutrition Research Laboratories, Coonoor, has suggested the inclusion of 8 ozs. of milk per day in the average Indian diet in order to improve its quality. Expectant and nursing mothers and children up to 14 years of age will need much more. We have suggested that, taking into consideration the existing demand for milk products, the target for realisation in the near future should be an increase in milk production to the extent of at least 110 per cent.

It has been brought to our notice that, very recently, the production of synthetic milk which, it has been claimed, has the same nutritive value as natural milk, has been developed on a laboratory scale in Great Britain. In view of the importance of the milk problem in India we desire to emphasise the need for immediate investigation into the claims put forward on behalf of synthetic milk and for promoting its production in India on a large scale, if these claims are justified.

Fish.—India's long coast-line, her numerous rivers, lakes and tanks afford great opportunities for developing the fish industry. The total production of fish in India, both fresh water and marine is estimated at less than two crores of maunds per annum as against $9\frac{1}{2}$ crores of maunds, the estimated requirement of Bengal alone where 90 per cent, of the people eat fish. These figures should help to give some idea of the extent to which the fish industry will have to be developed in India.

Food yeast.—Yeast is of value as a supplement to poor Indian diets because of its richness in proteins and vitamins of the 'B' group. Certain strains of yeast, which can be grown on molasses, produce palatable products of high nutritive value. We strongly recommended the immediate investigation of the possibility of producing food yeast on a large scale in India.

Urea.—It has been brought to our notice that, while the production of animal proteins, such as meat and milk, through a process of feeding natural foods to certain animals is a costly and uneconomical process, a simple chemical, urea, which can be produced in abundant quantities at a low cost, when fed to ruminants is converted largely into proteins of the animal body. The production of urea may be linked with the process of manufacturing synthetic nitrogenous fertilisers and it is thus possible to promote

the manufacture of both cattle food and plant food at the same time. We strongly urge that this suggestion should be carefully investigated without delay.

66. Our further suggestions for improving the nutrition of the people include the production, in India, of the different vitamins in sufficient quantities to meet the requirements of the country as well as the provision of facilities for the storage, transport and distribution of food, particularly of perishable articles such as milk, fish and fruit.

67. Prevention of food adulteration.—The subject of food adulteration was recently investigated in detail by a Committee of the Central Advisory Board of Health. We support all its recommendations and, in particular, desire to draw the attention of the Governments in the country to three of these, namely, the establishment, on a permanent basis, of a standing Central Committee for Food Standards, which we understand has now been created by the Government of India on a temporary basis, the formation of provincial cadres of public analysts and the establishment of food laboratories in association with central and regional bacteriological laboratories in the Provinces.

68. Lastly, in order to secure an improvement in the quality of the food made available to the public, we recommend that the principles of the Agricultural Produce Grading and Marking Act, which now applies only to agricultural products, should be made applicable to articles of food other than agriculture and that early action should be taken to give effect to this suggestion.

HEALTH EDUCATION

69. According to modern conceptions, health education includes "not only instruction in purely health matters, but also those activities which are likely to influence favourably an individual's health knowledge, health attitude and health habits. Health education must promote health and health consciousness, and these are best achieved when health practices become part of an individual's daily life".

70. Health education is gradually taking its proper place in the life of the people in India, but progress has so far been slow. The teaching of hygiene is compulsory in all ordinary schools and it is also a subject of study in the curriculum of all normal schools and teachers' training institutions, but the standards of teaching vary from province to province. "The low standards of personal and environmental hygiene met with in many schools..... lead to the conclusion that something is wrong with the content of the syllabuses and the methods of teaching hygiene both in training institutions for teachers and in schools for children."

71. As regards the general population, health education is mainly carried out by the provincial public health departments. In most provinces a special health propaganda organisation exists in the office of the Director of Public Health. In certain provinces a good deal of hygiene publicity work is also being done in the rural areas by some other departments of Government. For instance in the Punjab, the Rural Reconstruction Department and the Co-operative Department have been actively co-operating in health education of the people. In no province, however, has health education come up to the standard reached in the more advanced countries.

Our Recommendations

72. We support the recommendation of the Central Advisory Boards of Health and of Education that the instruction of school children in hygiene should begin at the earliest possible stage. Such instruction in the early stages should be entirely practical and devoted to the formation of health habits and the promotion of personal hygiene. It is particularly important that the student should see, in actual operation, the sort of hygienic and sanitary arrangements he is taught and encouraged to demand for himself. School clubs, societies such as the Indian Red Cross Society and the St. John Ambulance Association and organisations like the Boy Scout, Girl Guide, Hindustan Scout and Bratachari movements can actively help in the development of the health education programme for school children.

Health Education of the General Population

73. The main responsibility for assisting and guiding the health education of the general population should rest on the health departments of Governments and the establishment is recommended of properly constituted Health Publicity Bureaux as part of the Central and Provincial Health Departments. One of the functions of the Central Health Publicity Bureau should be participation in the active promotion of health education among all sections of the population and the giving of suitable advice and help to provincial health departments in organising health propaganda in their own territories. Another important duty of this Bureau should be the publication of an Indian Health Journal.

74. The organisation of health propaganda is a highly specialised task and it should therefore be entrusted to persons capable of producing results. The methods of propaganda which commercial organisations, such as the Indian Tea Association, have employed with great success should be studied and adopted, as far as practicable, in the development of the health education campaign.

75. The establishment of permanent health museums in the larger towns and cities is also recommended.

PHYSICAL EDUCATION:

76. Till the beginning of the twentieth century no one looked upon physical education as an integral and important part of general education. During the last 20 years revolutionary changes have taken place in all civilised countries in the concept and content of physical education and training.

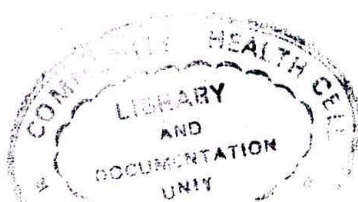
77. Something has been done in India to give physical education and training their proper place in the educational structure, but a great deal remains to be accomplished. There is a great dearth of suitable teachers qualified to impart instruction in this important subject. We require many suitably equipped and staffed physical education schools and colleges in the country. At present there are only five physical education colleges in India. At a rough estimate the total number of physical training teachers trained at these institutions during the last 20 years, does not exceed 3,000—far too small a number for the needs of the country.

Our Proposals

78. The training of physical education instructors.—For the proposed post-war schemes of education thousands of qualified physical training teachers will be required. We therefore recommend that there should be one or two physical training colleges in each province. Each institution should grant a recognised qualification. In addition, physical education should be made a compulsory subject in normal schools. A certain number of qualified physical training instructors should be sent abroad at State expense for higher training. On return they should be employed in responsible administrative and teaching posts, where their special training would be of value.

79. A physical training programme for the community.—In the beginning it may be advantageous to develop a single organisation to serve the needs of school and college students as well as of the general public. The school master, because of his general education and of the influence he is able to exert on successive groups of pupils, is in a position to evoke a favourable response from the public in the matter of physical education and culture. He should therefore be utilised for developing a physical education programme for the adult population. It will be necessary to establish a suitable organisation in each province and this may, with advantage, be made part of the Provincial Education Department. It is essential that this organisation should establish close liaison with the Health Department.

The national physical education programme should include indigenous games, sports and folk dances. A blending of the old and the new in an attempt to evolve a sound scheme of physical



culture is advisable. In this programme separate provision should be made for students, the male adult population and for girls and women.

HEALTH SERVICES FOR MOTHERS AND CHILDREN

80. We have drawn attention to the high rates of morbidity and mortality prevailing among mothers and children in this country. Measures directed towards a reduction of sickness and mortality among these sections of the community must have the highest priority in our programme of health development.

The Primary Unit.—The staff available for health service for mothers and children in a primary unit will consist of a women doctor, four public health nurses, four midwives and four trained *dais*. The provision for institutional service will consist of a dispensary at the headquarters of the unit and a hospital of 30 beds serving four such units together. At the dispensary there will be provision for four beds, of which two will be for maternity cases. In the 30-bed hospital six beds will be set apart for maternity and gynaecological cases and there will be four cots for children.

81. At the headquarters of each primary unit and in the places in which 30-bed hospitals are located, the services of a medical officer will be available and there will also be provision for a small number of maternity beds. With these facilities it should be possible to organise a maternity and child welfare centre on a reasonably efficient basis. Its range of activity can be expanded as and when more trained personnel and funds become available and communications improve. The functions of the centre will include the following :—

- (a) to get in touch with as many pregnant women in the area as possible and to persuade them to visit the clinic regularly, so that periodical examinations may be carried out and a record of their medical history kept;
- (b) to provide for the skilled assistance of a midwife or trained *dais* at the time of delivery and for domiciliary visits by her for two weeks thereafter;
- (c) to keep the mother and infant under observation, if possible, for a year;
- (d) to teach mothercraft in all its branches and to inculcate sound hygienic habits in the mother and child;
- (e) to keep children under observation, if possible, till five years of age;
- (f) to organise periodical talks, by suitable persons, for husbands and fathers in order to secure their co-operation in the development of a healthy and happy home; and

- (g) to aim, in general, at becoming the focus of social activity in the area as far as mothers and children are concerned.

Whenever practicable, a playground for children of two to five years of age should be provided as close to the centre as possible, with toilet accommodation for mothers and children and with bathing facilities.

82. In the other three circles of each primary unit, to which we have already referred in describing the ~~short-term health~~ organisation, the resident staff will be only a public health nurse, a midwife and a trained *dai*. The woman medical officer of the unit should visit the headquarters of each of these units once a fortnight. The public health nurse should hold a weekly session while the woman medical officer should attend every alternate session. The same lines of activity should, as far as possible, be followed in the peripheral circle as those described for the maternity and child welfare centre at the headquarters of the primary unit.

83. The Secondary Unit.—The 200-bed hospital at the headquarters of the secondary unit should have about 50 beds reserved for maternity and gynaecological cases. In the second five-year period of the short-term programme the 200-bed hospitals constructed during the first five years will, it is hoped, be enlarged so as to provide 500 beds. In this case the provision for maternity and gynaecological cases should be raised to about 125 beds. The better facilities thus made available in these institutions will make a higher type of service possible, while the telephone and ambulance organization, which we have recommended, will help to extend these facilities to the more serious cases occurring in the primary units.

84. The Provincial Headquarters.—At the headquarters of each province there should be on the establishment of the Director of Health Services, a competent woman doctor with wide experience in the organisation of health services for women and children.

Social and Economic Factors

85. The two most important among these factors are inadequate nutrition, including malnutrition and under-nutrition, and the strain resulting from over-work in the home or outside.

Nutrition.—The pregnant woman, nursing mother and the growing child require a more generous and nourishing diet than the general population and the health services for these two sections of the population, howsoever elaborate and efficient, will fail to

produce satisfactory results unless simultaneous measures are taken to improve their nutrition. An annual provision has been suggested in the budget of each primary unit in order to enable the woman medical officer to make suitable additions to the diet of pregnant women, nursing mothers and growing children.

Overwork.—The strain resulting from overwork affects a woman's health both during pregnancy and in the postnatal period. In the chapter relating to industrial health the grant of maternity benefits and compulsory abstention from work for a period of six weeks before and six weeks after confinement are recommended for all women employed in industry. We have suggested that these concessions should, in due course, extend to all women gainfully employed outside their homes.

Nurseries

86. The provision of nurseries or *creches* to relieve the mother, especially the working woman, from her responsibility for the care of the child during her hours of work, has been a noticeable development in all highly industrialised countries. In this connection we wish to draw attention particularly to what has been accomplished in the Soviet Union for the development of nurseries as an integral part of the child welfare organisation (vide Appendix 13, Volume III). The nursery in Soviet Russia serves a three-fold purpose, viz., that of relieving the mother, of caring for the child and of educating the mother and child. The aim is to make children healthy in body and mind, to draw out their innate faculties and to make them self-reliant.

Maternity Homes

87. The establishment of private maternity homes, in response to the growing demand of the public for institutional facilities for confinement, is a noticeable feature in some of the larger urban centres. The strictest possible control should be exercised by local health authorities over the establishment and maintenance of such institutions. The provincial Ministry of Health should prescribe suitable standards in respect of these homes and should see that they are enforced.

HEALTH SERVICES FOR SCHOOL CHILDREN

88. In India, school health services are practically non-existent, and where they exist, they are in an undeveloped state.

The Functions of a School Health Service

89. The duties to be performed by a school health service fall into two main groups; (i) health measures, preventive and curative, which include (a) the detection and treatment of defects, physical

and mental and (b) the creation and maintenance of a hygienic environment in and around the school, and (ii) measures for promoting positive health. The last should include (a) improvement of the nutritional state of the child, (b) physical culture and (c) health education by formal instruction and the practice of the hygienic mode of life.

The duties enumerated in (i) above should be performed by the health organisation while those indicated in (ii) will devolve on the teacher. There should, however, be close co-operation between the health and education staffs.

Some General Suggestions

90. (i) In each primary unit the male medical officer should normally be put in charge of the school health service.

(ii) To begin with, this health service should be restricted to primary school children, their number being limited to 1,000, which is as much as the medical officer can look after efficiently.

(iii) At least two teachers from each school should receive training in certain elementary health duties and should receive an additional remuneration for attending to such duties.

Stages of Development

91. The proposed school health organisation should first be developed in an area close to the headquarters of a province, in association with the Department of Preventive Medicine in the medical college located there. The second stage would mark the extension of the school health programme to the districts in two steps, namely, to the headquarters of the secondary units and subsequently to the headquarters of individual primary units. Two more stages are envisaged, these being extensions, of the scheme so as to include (1) the whole area of individual primary units and (2) the students of secondary and high schools and of colleges.

92. The school health work to be carried out in a primary unit should include all the main functions of a school health service to which we have already referred. We suggest that a school clinic should be established at the headquarters of each primary unit to perform duties in connection with the school health programme in the same manner in which the maternity and child welfare centre we have recommended is intended to help in the promotion of health work among mothers and children. Besides providing treatment for minor ailments to the pupils in all schools included in the scheme, the clinic should undertake certain specialised types of service such as dental care and the treatment of conditions relating to the eye, ear, nose and throat, which are

relatively common among children. Such provision will be supplemented by a certain amount of routine treatment carried out in the school by the two specially trained teachers referred to above, under the guidance and supervision of the school medical officer. Follow-up work in the homes of the children by the public health nurse in order to discover and rectify, as far as possible, such defects in the home environment as are responsible for the illhealth of the pupil is also an important part of the preventive school health campaign.

93. We desire to see the school clinic developed into an organisation for bringing together the children, the parents and the teachers. For this purpose periodical meetings should be arranged at which interesting and educative programmes should be developed. Educational films can be shown, short talks on health matters arranged and people with special talent for music and other forms of entertainment, whether among the pupil teachers or parents, encouraged to play their part towards making such gatherings a success. The atmosphere of goodwill that can thus be developed will be of advantage to all.

Co-operation between the Health and Education Authorities

94. The District.—If our suggestions for the future development of local self-governing institutions are carried out there will be a District Health Board and a District Education Board functioning over practically the whole area of individual districts. In each district, a Joint Committee of the District Health and District Education Boards should be established and this body should be responsible for ensuring that the necessary co-operation between the health and education authorities is secured.

95. Provincial headquarters.—At the headquarters of the province there should be a Co-ordinating Committee with the Director of Public Instruction and the Director of Health Service as members. The managements of private schools and of approved associations of teachers and of parents should also be represented on this Committee, which will advise Government on all matters relating to school health administration, including the distribution of grants-in-aid.

OCCUPATIONAL HEALTH INCLUDING INDUSTRIAL HEALTH

96. The conditions affecting the health of the worker may broadly speaking, be divided into two groups, namely, those which he shares with the other members of the general community among whom he lives and those which are associated with the occupation he pursues. In regard to the latter there

may be special hazards to health arising out of particular occupations. The development of anthrax by those handling wool or skins and hides or poisoning by lead, chrome and other substances which are used in a variety of trades or manufacturing processes are examples of such special hazards. There are also other factors which have their influence on the health of the worker and these include the lighting, ventilation and general sanitation of the workshop or factory, the dust and noise associated with the working environment and the provision that exists for rest pauses, meals and personal cleanliness. Over and above the general provision for health protection which the worker can share with the other members of the population, he has the right to claim that special measures should be taken to counteract the adverse effects of those factors which are associated with his occupation. The provision of such special health measures is the function of an industrial or occupational health service. To a greater or less extent, all those who are gainfully employed outside their own homes will require the services of the occupational health organisation. While recognising this as the ultimate objective we realise that, in the immediate future, Governments will have to concern themselves with measures mainly for industrial workers, including within that term those who are employed in factories, docks, mines, plantations, transport services and certain other occupations.

The Functions of an Industrial Health Service

97. The functions of an industrial health service have been well described in the following words by the Social and Preventive Medicine Committee of the Royal College of Physicians, London, in their Second Interim Report which deals with industrial medicines :—

- (a) to promote the general health of the worker by providing a good working environment and fitting him to the latter;
- (b) to prevent occupational disease;
- (c) to assist in the prevention of injuries at work;
- (d) to organise a service for emergency treatment;
- (e) to help in restoring the injured and disabled to full working capacity;
- (f) to educate workers in the preservation of health and promotion of wellbeing; and
- (g) to promote research and investigation.

These may be accepted as the objectives to be aimed at in organising an industrial health service in India.

98. The proposed industrial health service will not minister to the general medical needs of the workers. This function will have to be performed by the health service for the community as a whole. The industrial health organisation is intended to meet the needs of the worker in respect of that group of factors affecting his health which are associated with the occupation he pursues. The two services are complementary to each other and will together provide him with adequate medical care. The industrial health organisation should form an integral part of the Provincial Health Department and should be developed as such.

99. We understand that the creation of a Central Health Insurance Fund, which will be raised by contributions from Government, employees and workers and will be utilised for the benefit of the workers, is under contemplation. If the proposed Central Fund comes into existence, it should be possible, by grants from it to promote the development of an even higher level of general health service for industrial workers than that envisaged under our shortterm scheme for the community. Further grants from this fund, if available, could be utilised for establishing an industrial health organisation on the lines indicated above.

100. While these proposals for an industrial health service will obviously take time to materialise, we have put forward certain recommendations for early consideration and appropriate action by Governments. These recommendations cover a wide field and it is only the more important ones among them that are referred to here. For more detailed information reference should be made to Chapter X of Volume II of our report.

Maternity Benefit

101. The maximum period for maternity benefit for women workers under the different Provincial Acts is four weeks before and four weeks after childbirth. Under the International Labour Convention the period recommended is six weeks in both cases and we endorse this recommendation. During these periods a woman worker should be paid her full wages, because it is just at this time she requires nourishing food and special treatment.

Hours of Work

102. From the health point of view, we recommend that the maximum hours of work should be reduced to 45 hours a week, i.e., 8 hours a day for five days and 5 hours for another day in the week and that the Factories and other Acts should be amended accordingly.

In the case of seasonal factories, which may be obliged to work under considerable pressure during only a part of the year,

this maximum may be increased after taking into account such relevant factors as the extent of hazard to health which the occupation involves and the distance that the workers will have to walk back to their homes.

We recommend an interval for the mid-day meal of not less than one hour, exclusive of working hours.

The period during which a worker may be continuously on night duty should be limited by statute to a fortnight.

Housing

103. (a) In our opinion the housing of the industrial population is primarily the responsibility of the Governments concerned. The following minimum standards of housing are, we consider, required for the health of the industrial worker and his family.

- (i) For a single man : a room 10 ft. \times 12 ft. \times 10 ft. and a verandah 8 ft. \times 8 ft. \times 10 ft. For a group of such quarters there should be provided community kitchens, latrines and bathing places in accordance with the standards to be prescribed by the Provincial Government. Where common kitchens are not provided, provision should be made for choolas on the verandahs with suitable chimneys for the outlet of smoke. Where latrines and bathing places for common use are erected, they should be at a reasonable distance from the quarters and, if possible, connected by a covered way for protection during bad weather.
- (ii) For a family : for a married couple two rooms 10 ft. \times 12 ft. \times 10 ft. with a verandah, kitchen, bathroom and latrine. For a family including grown up children the accommodation should be increased by at least one extra room of similar size.

(b) In regard to sanitary conveniences, we suggest that, as far as possible, septic tank and soil distribution systems should be introduced so that the handling of nightsoil may be avoided.

The Nutrition of the Workers

104. Our recommendations for improving the nutrition of the workers include making it obligatory for industrial establishments employing a minimum number of workers to maintain canteens providing suitably balanced diets at reasonable cost, the encouragement of workers by employers to observe regular meal hours, the strengthening and stricter enforcement of the law relating to the sanitary control of the production, distribution and sale of food, including measures against adulteration, the active

promotion of schemes designed to improve milk production and its supply as an article of food to workers and the establishment of nutrition sections in Provincial Health Departments, which should carry out nutritional surveys among industrial workers and assist in improving the nutrition of workers through educative work among employers and employees.

The Zoning and Location of Industry

105. (a) Town and Rural Planning Acts should be passed by Provincial Legislatures setting up in each Province a separate Ministry for Housing and Town and Rural Planning with wide powers to deal with the housing of the industrial population and with the zoning and location of industry.

(b) Before the establishment of any new industry or factory is agreed to by the Provincial Government, the Minister should satisfy himself that, in the lay-out, adequate provision is made for the housing of workers, for their transport to and from the factory and for adequate environmental amenities.

(c) We wish strongly to reiterate the recommendation of the Royal Commission on Labour that Provincial Governments should take steps to prevent industries being established in places where there will not be sufficient room for adequate housing or other necessities such as water supply, electric power, etc. This should be the function of the Ministry of Housing and Town and Rural Planning if established, and, under the appropriate legislation, rules should be framed to regulate the growth of industries from this point of view.

(d) Where possible, having regard of course to the relevant economic factors, new industries should be dispersed in rural areas so that the local inhabitants may derive the fullest benefit from industries being brought within their immediate circle. The present system of establishing factories near or in big towns, where the workers are forced to live in crowded tenements and under artificial and insanitary conditions, is harmful alike to the town dwellers and the workers themselves. The health problem of workers in such industries would be greatly simplified if industrial establishments could be located in rural surroundings.

Employment of Children

106. (a) The minimum age for employment in industrial establishments, docks, etc., should be raised to 15 and persons between 15 and 17 should be eligible for employment as adolescents on the certificate of the certifying surgeon:

(b) the minimum age for the employment of children on plantations and public works should be 13.

(c) In course of time when the compulsory school leaving age is raised and adequate educational facilities become available, the employment of children under 15 should be abolished for all types of industrial establishments and occupations.

HEALTH SERVICES FOR THE MORE IMPORTANT DISEASES

107. We shall deal here with the specific measures necessary for controlling the prevalence of the following diseases.

1. Malaria.
2. Tuberculosis.
3. Smallpox.
4. Cholera.
5. Plague.
6. Leprosy.
7. Venereal diseases.
8. Hook-worm disease.
9. Filariasis.
10. Guinea-worm disease.
11. Cancer.
12. Mental diseases and mental deficiency.

Malaria

108. We have already pointed out that malaria is by far the most important disease in India from the point of view of morbidity and mortality and that the economic loss it entails is immense. A tragic feature of the situation is that much of the malaria in the country is man-made. In many cases roads, railways and irrigation projects have a sinister account to their credit, their embankments having caused conditions of water-logging favourable to the breeding of the malaria carrying types of mosquitoes. The failure of irrigation engineers to provide for adequate drainage when water is brought into previously dry areas has been another fruitful cause of the spread of the disease, recent examples being certain areas in Sind, the province of Madras and Mysore.

Our Recommendations

109. Antimalaria organisations in the Provinces and at the Centre.—The Director, Malaria Institute of India, has pointed out that "an essential preliminary to the successful control of malaria in India is the formation of an adequately staffed permanent malaria organisation in each province, the activities of which should be linked up with those of the central organisation of the

Government of India". We fully endorse this view. Our recommendations, therefore, include the establishment of antimalaria organisations in the provinces as well as the strengthening of the staff of the Malaria Institute of India in order to enable it to fulfil its important tasks of advising provincial administrations in the development of antimalaria measures, of co-ordinating such work in the provinces and of training the higher types of malaria personnel for the country as a whole.

110. The general provincial plan we have recommended is the creation of an organisation at the headquarters of each province and the establishment of a number of malaria control units, each under a medical officer specially trained in antimalaria work, for operating in the affected areas in different parts of the province. The most essential requirements are (a) the provision of trained staff in adequate numbers and (b) the supply of drugs, appliances and other equipment necessary for carrying out effectively the campaign against the disease. We deprecate the idea of spending large sums of money on the erection of elaborate buildings in the early stages of our programme.

Drugs of Treatment

111. Quinine and inepacrine are the two drugs which are widely used for the treatment of malaria. There is already an indication that an even more effective synthetic product, paludrine is likely to come into the field at an early date. We recommend that the following three general principles should guide the production of quinine and other antimalaria drugs:—

1. the prices at which antimalaria drugs are made available to the people should be sufficiently low to enable the poorest classes to obtain them in adequate amounts for the effective treatment of the disease.
2. these drugs, in whatever provinces they may be produced, should be made available, on an equitable basis and on reasonable terms, for the needs of all parts of the country and
3. no delay should be allowed to occur in developing the production.

We as a Committee would prefer to leave to the Government in the country the responsibility for deciding whether private enterprise should or should not be associated with the production of quinine and other antimalaria drugs.*

*Sir Frederick James desires to see that private agencies are given the fullest opportunity to take part in quinine production with technical advice and a price guarantee provided by the State. His views are set out in a note which is appended to the section on malaria in volume II of our report.

112. Quinine and mepacrine.—If the estimate of 100 million individuals suffering from malaria every year is reasonably correct, it seems safe to assume that at least 120 to 150 million cases of the disease will have to be treated annually. The Malaria Commission of the League of Nations has recommended 75 grains of quinine as the minimum quantity required for the treatment of a case. On these estimates of malaria incidence in India the amount of the drug necessary for the country as a whole will be in the neighbourhood of about 1.5 million pounds per year, if quinine is alone used for treatment. The average annual consumption of the drug in the pre-war period in India was 210,000 pounds and, of this amount, only about a third was produced in India. The quantity consumed every year in this country would provide adequate treatment for about 19.6 million patients. As the objective to be kept in view for the immediate future, we recommend that sufficient quinine and mepacrine should be provided to meet jointly the requirements of at least 50 million patients. As regards quinine our immediate objective should be the raising of its production to the pre-war level of consumption in India from indigenous bark alone. As regards mepacrine, provision should be made for its production in the country in sufficient amount to meet the requirements of 30 million patients.

Anti-malarial Insecticides

113. The cultivation of the pyrethrum plant has been successfully undertaken in various parts of India including Kashmir, the Punjab Hill States, the United Provinces, the Central Provinces, Madras and Orissa. It has been estimated that, in order to make the country self-sufficient, pyrethrum cultivation will have to be extended to about 120,000 acres so as to produce an annual output of about 15,000 short tons (2,000 lbs. for a ton) of pyrethrum flowers. In D. D. T. an even more powerful insecticide has come into use.

114. As an insecticide the relationship of D. D. T. to pyrethrum is somewhat similar to that of mepacrine to quinine in the treatment of malaria. There is the possibility in both cases of the synthetic substance replacing the use of the other. The cultivation of pyrethrum can, in this event, be replaced at short notice by other crops.

Tuberculosis

115. Annually about 500,000 deaths take place from tuberculosis in India and about 2.5 million open cases of tuberculosis exist in the country. These patients are continually disseminating infection among those with whom they come in contact. There is reason to believe that the incidence of the disease is higher in

urban and industrialised areas than in rural regions. Owing to the migration of the labour population between industrial and rural areas and the increased facilities for rail and road transport, the tendency has been for tuberculosis to spread to the countryside. Certain factors such as malnutrition and under-nutrition and insanitary and overcrowded housing conditions also contribute their share to the dissemination of infection.

116. An essential requirement for controlling the spread of tuberculosis is provision for the isolation and treatment of infective cases. As against an estimate of 2.5 million infective patients in the country the total number of beds available for isolation is in the neighbourhood of 6,000. The number of doctors with sufficient experience of tuberculosis work to qualify them for posts in tuberculosis institutions does not probably exceed 70 or 80, while those who have had a short course of four weeks in the subject may number about 250 or 300. Fully trained tuberculosis health visitors are, in all probability, only about 100.

117. This brief statement of the existing position should help to show the magnitude of the health problem which tuberculosis presents in this country and the total inadequacy of the existing facilities for dealing with it.

Our Recommendations

118. In order to provide a comprehensive and integrated service the tuberculosis organisation should include, (1) a domiciliary service, (2) clinics, (3) hospitals, (4) after-care colonies, (5) homes for the incurable and in addition, (6) certain ancillary services.

119. A home isolation and treatment service.—A scheme for organised home treatment has been working in Delhi during the past few years under the guidance of the New Delhi Tuberculosis Clinic maintained by the Tuberculosis Association of India. This scheme has attained only very limited success, the reasons being (1) certain difficulties arising out of the war, (2) the extremely unsatisfactory housing of the poorer sections of the community and (3) the inadequacy of the funds made available for its working.

120. The question of housing seems to present the greatest difficulty, particularly in respect of tuberculosis patients of the poorer classes, who live in one-room tenements where isolation is impossible. We recommend that, as a part of the antituberculosis campaign, local authorities should construct and maintain a number of suitable dwellings into which the patient and members of his family can be removed. Patients among the poorer sections

of the community will, on such removal, require to be provided with accommodation free of charge.

121. The tuberculosis clinic.—The clinic forms the centre from which curative and preventive work in tuberculosis will spread into the homes of the people. The treatment facilities it offers will help to cure a certain number of patients, while the more advanced cases will be sent for treatment in hospital. Those patients whose condition is too advanced for attendance at the clinic, will receive domiciliary treatment from the medical and nursing staff of the clinic. During visits to the home the patient will be advised, by the doctor and the nurse, to carry out effective isolation, contacts will be persuaded to attend the clinic for examination and early detection of the disease and steps will be taken to promote the welfare of patients and their families by establishing contact between them and voluntary organisations interested in welfare work.

122. Tuberculosis hospitals.—The provision of sufficient hospital accommodation to meet the requirements of the country is bound to take many years and therefore in the early stages, only such patients as are likely to benefit should be admitted to hospitals.

123. Our proposals for the development of hospitals and clinics during the short-term programme are given below.—

Institutional service

The first five-year period :

- (1) the establishment of a 200-bed tuberculosis hospital for each unit of 10 million population;
- (2) The establishment of a large clinic (to be designated the "Main Clinic"), with facilities for the training of medical and non-medical tuberculosis personnel, at each of the places where the 200-bed hospital will be created; and
- (3) The establishment of clinics of a smaller type at the headquarters of each district in British India. The total number required, after deducting the 33 main clinics, will be 183.

Second five-year period :

- (1) 33 more 200-bed hospitals;
- (2) 33 more main clinics at the same places where the new hospitals will be located; and
- (3) 183 more district clinics.

The clinics and hospitals can serve only limited areas around the places where they are located. Even so, in these limited areas, as domiciliary tuberculosis service should be organised in association with each clinic. A certain number of suitable cases will be sent by the clinic to the nearest tuberculosis hospital for more satisfactory treatment than can be provided locally.

124. After-care of patients.—In a considerable proportion of cases tuberculosis patients do not completely recover their previous health and, in order to prevent relapse, it is essential that less strenuous working conditions and a more hygienic home environment should be provided for them on their return from hospital. To meet these requirements after-care colonies should be established in close association with every tuberculosis hospital.

125. Homes for incurables.—The need here is for the provision of such care as will make the final phase of sickness reasonably comfortable for the patient. We recommend that, while Governments should undertake the building and equipment of such institutions, their maintenance can be suitably entrusted to philanthropic or religious organisations interested in social welfare, Governments undertaking to meet a substantial part of the expenditure through generous grants.

126. Travelling tuberculosis units.—One way of extending the activities of the tuberculosis organisation outlined above is by providing travelling tuberculosis clinics based on the district clinic and working as far into the rural areas as possible. These units will have motor vehicles so equipped with all the necessary drugs and appliances, including provision for x-ray examination of patients, as to enable them to carry diagnostic and treatment facilities of a reasonably high order to the areas served by them. These units should have a fixed itinerary and should make about 3-4 visits per month to each of the 30-bed hospitals and dispensaries at the headquarters of individual primary units in the areas under the scheme. Apart from the diagnostic and treatment facilities which these units can offer, they should also help the tuberculosis campaign by carrying out intensive education propaganda in those areas.

Smallpox

127. Smallpox is one of the three major epidemic diseases of India, the other two being cholera and plague. During the period of 60 years, 1880-1940, the average annual rate of smallpox mortality per hundred thousand of the population has varied from 10 to 80. Even after making allowance for such variability, there is reason to believe that the total incidence of the disease has decreased in the country as a whole. For instance if the two ten-year periods, 1902-11 and 1932-41, are compared and due

allowance is made for the increase in the population of the country, the rates of mortality from smallpox per 100,000 of the population are seen to be 40 and 25 respectively. Nevertheless, it is a matter for serious concern that the average number of deaths per year from smallpox for the period 1932-41 should have been as high as 70,000. The annual epidemiological reports which are published by the League of Nations show that the rate of incidence of smallpox in India is the highest among all the countries for which statistics are given.

128. Striking evidence of the fact that the vaccination campaign in the country has not so far been carried out effectively is that, of the total number of smallpox deaths at all ages, high proportions occur among infants under one year of age and among children between 1 to 10 years. During the five-year period, 1937-41, deaths due to smallpox among infants under one year, when expressed as percentages of the total mortality from this cause at all ages, ranged from 12.1 to 19.7 and, during the same period, the corresponding percentages for children between one and ten years varied from 19.2 to 30.5. If effective primary vaccination is being enforced in the country, it is children under ten who should have the highest measure of protection.

129. One of the serious consequences of smallpox is that, not infrequently, those who recover from it lose their sight partially or wholly. Blindness is a very serious handicap in life to all persons and is particularly so in the case of children with the prospect of a much longer period of disability than for those who lose their sight at a more advanced age.

Our Recommendations

130. Primary vaccination and revaccination.—Primary vaccination was compulsory in 1941 in only about 81 per cent of the towns and 62 per cent of the rural circles in British India. In the province of Bombay primary vaccination was compulsory only in 4.9 per cent. of the rural circles while in the North-West Frontier Province, the United Provinces, Sind, Assam, Coorg and Ajmer-Merwara it was not enforceable even in a single rural circle. Revaccination has been made compulsory as a routine measure only in the province of Madras.

131. We consider it essential that primary vaccination should be made compulsory throughout the country without delay. We also recommend that other Provincial Governments should, as early as possible, follow the example of the Government of Madras in making revaccination compulsory.

132. The training of vaccinators, their recruitment and conditions of service.—There is considerable variation in the provinces as regards the training given to vaccinators: the methods

of their recruitment and their conditions of service. The duration of the training varies from 3 to 10 months and the salary paid to them ranges from a minimum of Rs. 10 per month in Bengal to a maximum of Rs. 50 to a first class vaccinator in Madras. In the provinces of Bihar and Orissa the vaccinators employed in rural areas are given no salary at all, the fees they may realise from the people for vaccinations carried out in their homes being their sole remuneration. They are normally engaged for work only during the vaccination season, October to March. Such conditions of service cannot attract and keep the right type of worker.

133. The lowest figure for the average number of vaccinations performed in a year by a vaccinator was recorded in Bihar in 1939, namely 1,520, as against an average of 2,951 for British India as a whole and the highest figure of 7,587 for the Punjab.

134. In the areas under our scheme vaccination against smallpox should be one of the normal functions of the public health inspectors, public health nurses and midwives employed in each primary unit and the employment of a special class of vaccinators is not necessary. Vaccination is only one of the many forms of specific protection against particular diseases which the health department should provide for the people, and the operation itself is so simple that there is no justification for the employment of a special staff for this purpose. During the first year of the working of the programmes the total population of 40,000 in a primary unit should be vaccinated. For this individual members of the staff mentioned above will be required to devote only about 18 to 20 days of work.

135. In the areas outside our scheme it is equally essential that an intensive vaccination campaign against smallpox should be organised without delay. An important step in this direction is an improvement in the training and conditions of service of vaccinators in many provinces. The number of vaccinators employed will have to be increased adequately and, basing our recommendations on data available from Madras, we have indicated how other provinces may institute an effective campaign of primary vaccination and revaccination.

Cholera

136. Cholera is another preventible disease which takes a heavy toll of life in the country and shows a wide range of variation in its incidence from year to year. Some idea of this range of variation may be obtained from the cholera mortality figures for the province of Madras in 1939 and 1943. In the former the total deaths from the disease numbered about

2,000, the lowest incidence recorded for 60 years. In 1943 it spread to every district in the province and the registered mortality from this cause was 117,000. The incidence of cholera varies from province to province, those in which its prevalence is high being Bengal, Madras, Bihar and the Central Provinces and, to a smaller extent, Orissa and the United Provinces.

137. The measures required for the control of the disease fall broadly into two groups, (a) those which are permanent and (2) those which are of a temporary nature. The former include the following:—

- (1) the provision of protected water supplies;
- (2) the satisfactory disposal of nightsoil so as to prevent the possibility of contamination, by infective material, of food and water supplies; and
- (3) sanitary control over the production, distribution and sale of food.

In regard to each of these the position in India today is far from satisfactory. Protected water supplies are available only in the larger towns and cities and they serve only small proportions of the population in individual provinces. Provision for the proper collection and disposal of nightsoil is quite inadequate in rural areas and in the majority of urban centres, including many towns and even certain cities. The sanitary control exercised over the production, distribution and sale of food leaves much to be desired in all parts of the country.

138. Anticholera measures of a temporary nature are of special value when an outbreak of the disease takes place. These include:—

- (1) isolation and treatment of patients;
- (2) disinfection of infective material; and
- (3) immunisation of the people by anticholera inoculation.

As regards (1) and (2) above little or no effective action is being taken in most parts of the country, particularly in the rural areas. Isolation hospitals are few in number and even those that exist are far from satisfactory as regards their staffing and equipment. As regards anticholera inoculation, the popularity of this measure has been a process of steady growth. The people have come to recognise its value and are, broadly speaking, willing to accept inoculation when an outbreak of the disease takes place.

Our Recommendations

139. Permanent measures.—We have suggested, in the chapters dealing with water supply and general sanitation,

comprehensive programmes of developments of urban and rural water supply and nightsoil disposal systems. In providing these basic facilities for sanitary improvement, Provincial Governments should direct that, in fixing priority, consideration should be given to the incidence of cholera in individual towns and villages. In this way, the main centres of cholera prevalence can be brought under effective control and the spread of the disease from such sources of infection, prevented. Simultaneously with these improvements the gradual extension, over the country as a whole, of the health organisation we have recommended should help to introduce a large measure of control, over the food of the people so as to ensure freedom from contamination. There will also be a rise in the general level of environmental hygiene. The combined effect of all these measures is bound to be a marked reduction in the incidence of cholera and other bowel diseases.

140. Temporary measures.—The temporary measures we have indicated above should be carried out by the primary unit staff as effectively as possible. The active assistance of the members of the Village Health Committees would prove invaluable in enforcing these measures.

Pilgrim Centres

141. Pilgrim centres have, in the past, played an important part in the spread of cholera. The adoption of special measures for safeguarding the health of pilgrim centres has now become an established practice in the country. In addition it has been found useful to enforce the compulsory inoculation of persons against cholera before they are permitted to attend such festivals. At the instance of the Central Advisory Board of Health this measure has been carried out by a certain number of Provincial Governments in selected festival centres with encouraging results. The adoption of this measure on a wide scale should prove to be an additional precaution against the possibility of outbreaks of cholera starting in festival centres.

Plague

142. The history of plague in recent times dates from 1896 when it was introduced into the seaport of Bombay from China and spread rapidly over very large parts of the country. In 1904 deaths from this disease reached the very high figure of nearly 1,150,000. Since then there has been a considerable reduction in the incidence of plague, the average annual mortality from this cause during 1939-41 being only about 19,350.

143. Plague is primarily a disease of certain rodents and human infection on an appreciable scale takes place only under conditions favouring close association between man and such

rodents. In India the animal is the rat while, in other countries, the reservoirs of plague infection are certain other rodents. Man becomes infected from such animals through the bite of the fleas which live and feed on these animals.

144. Plague appears in two forms, bubonic and pneumonic, the latter being the more severe of the two. The rate of mortality in bubonic plague may be high as 60 to 70 per cent among those who are attacked, while that for pneumonic plague is practically cent per cent.

145. Although the incidence of the disease has become very much reduced within recent years, the Director of the Haffkine Institute, Bombay, has pointed out that certain endemic areas exist in different parts of the country and that they constitute a constant threat in as much as, under favourable conditions, plague may spread from these centres to other parts of India. These centres are situated in cool and moderately damp areas from the Himalayas in the north through Central and Eastern India to the Deccan and the province of Madras.

Our Recommendations

146. The measures against the disease should mainly be directed against the rat as the primary reservoir of infection from which the disease spreads to man. The keeping down of the rat population in inhabited areas, particularly in the endemic centres of plague, is therefore an important preventive measure. Rats grow in numbers in human dwellings only when they can secure food and adequate protection. The elimination of these conditions is therefore the purpose to be kept in view. The systematic destruction of rats by various methods is also another important measure which should be generally adopted.

147. The steps to be taken for rendering the conditions in residential areas unfavourable to the growth of the rat population include (a) the construction of rat proof dwellings and rat proof grain stores and railway godowns, (b) control over the location of certain trades and industries which attract rats and (c) an improvement of the general sanitary condition of the towns and villages, as the throwing of barbage in public places encourages the breeding of rats by providing them with food. Our recommendations cover all these steps.

Treatment of Plague

148. Till recently, there was no specific treatment for plague and the efforts of the physician were mainly directed towards giving relief to the patient and to the keeping up of his strength. A few years ago the Director, Haffkine Institute, prepared a

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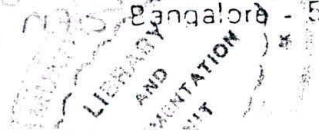
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serum which, on field trial, was established to be definitely more effective than the ordinary form of treatment. Sulphapyridin and sulphathiazole have also been found to be useful in the treatment of plague. Of the two, sulphathiazole is considered the better drug because its effectiveness is probably a little higher and its toxicity less.

Leprosy

149. The number of persons suffering from leprosy in the world has been estimated as somewhere about five millions and, of these, leprosy patients in India are believed to be at least a million. "There is a belt of high incidence including the whole of the east-coast and the south peninsula, including West Bengal, South Bihar, Orissa, Madras, Travancore and Cochin. In the central parts of India the incidence tends to be lower but there are some foci of higher incidence. - There is a belt of moderate incidence in the Himalayan foot hills, running across the north of India, while in most of the north-west of India there is very little leprosy."*

150. In the highly endemic areas its incidence may range from two or five per cent of the population and, in restricted areas, it may even be as high as 10 to 15 per cent. In the non-endemic regions of North-Western India, on the other hand, large areas may show no cases at all while the general level of incidence is stated to be as low as 0.01 per cent or one per ten thousand of the population.

151. Cases of leprosy are broadly divided into two groups, the "neural" and "lepomatous" types. The former constitutes the "benign" form of leprosy and the other the more severe and infectious type. While for the country as a whole the proportion of lepomatous cases is estimated at about 20 per cent of leprosy patients, there are areas where the proportion of this severer type is as low as 4 per cent and others in which it rises even to 50 per cent. In estimating the importance of leprosy as a public health problem the rate of incidence and the relative proportion of the lepomatous type should both be taken into consideration.

Our Recommendations

152. In order to promote antileprosy work on proper lines we put forward the following proposals for the short-term programme:—

- (a) the creation of provincial leprosy organisation;

*Report on Leprosy and its control in India (1941) by the Special Committee appointed by the Central Advisory Board of Health.

- (b) an increase of the existing provision for institutional treatment of out-patients and in-patients;
- (c) development of group isolation colonies;
- (d) substantial financial help to voluntary organisations engaged in antileprosy work and
- (e) the establishment of a Central Leprosy Institute.

The Provincial Leprosy Organisation

153. As a preliminary step towards organising antileprosy work on sound lines a leprosy organisation should be created at the headquarters of each province, in which the disease is a definite public health problem, this organisation being made an integral part of the provincial health service. At its head will be the Provincial Leprosy Officer, who will be responsible for organising antileprosy work in all its branches.

An Increase of the Existing Provision for Institutional Treatment

154. The leprosy clinic is an important link in the chain of measures for the control of the disease and it should perform the dual role of providing remedial and preventive care to the people in the same manner that the tuberculosis clinic does in the campaign against that disease. A start should be made by providing a properly equipped and staffed leprosy clinic in association with every secondary health centre hospital. Existing leprosy clinics require to be staffed and equipped properly in order to improve the quality of the work that they are doing.

155. Existing provision for the isolation of leprosy patient is limited to about 14,000 beds, while infective cases requiring isolation may well be about a quarter of a million. We propose that, in the first five years of our programme, an additional 14,000 beds should be provided and that, in the next five years, an equal provision of another 14,000 beds should also be made.

Development of Group Isolation

156. An adequate expansion of institutional facilities so as to provide for the isolation of all the infective patients in the country can hardly be expected to materialise for a very long time to come. The possibility of developing group isolation therefore requires serious investigation. Certain points to remember in this connection are that the period of isolation will be long, perhaps years, that provision should be made for medical care although it may not be of a very high standard, that the scheme, if it is to be widely adopted, should be sufficiently cheap to suit the economic level of the country and that provision should be made to promote corporate life in the isolated community and to enable

the more able-bodied members of it to work and contribute towards the maintenance of the colony.

157. Certain experiments for developing isolation colonies have already been carried out in this country and are being projected in the near future. Local conditions vary considerably in different parts of the country and we consider that group isolation colonies should be developed in all the more important areas where leprosy is a health problem. We have suggested an annual expenditure of Rs. 3 lakhs on the development of such colonies during the first ten years.

Financial Help to Voluntary Organisations.

158. Missionary bodies have so far contributed much more to the development of antileprosy work in India than public authorities. For instance, it is understood that a little over 10,000 beds out of a total of 14,000 in the country are maintained in missionary institutions. In addition to a wide expansion of measures against the disease under the auspices of the Governments and of local health authorities, it will be necessary for voluntary effort to continue unabated in this field and we have therefore recommended provision to the extent of Rs. 187.5 lakhs during the first ten years to subsidise such effort.

The Central Leprosy Institute

159. We consider it necessary that a Central Leprosy Institute should be established, its main functions being (1) the training of leprosy workers, (2) the active promotion of research in the subject and (3) the development of an information service providing the latest information regarding the treatment of the disease and antileprosy work in general for the benefit of Governments and organisations interested in leprosy in India.

Venereal Diseases

160. The incidence of venereal diseases in India is unknown. A survey (the results of which were published in 1933) by Sir John Megaw, a former Director General of the Indian Medical Service, regarding the incidence of syphilis and gonorrhoea in this country showed that the rate of their total incidence was somewhere near 37 per 1,000 of the population. This is a sufficiently high figure to point to the urgent need for fuller investigation as well as for the starting of a campaign against them on as extensive a scale as circumstances would permit. Their importance from the point of view of producing sickness and incapacitation cannot be over-emphasised. Both syphilis and gonorrhoea are responsible for such blindness. Of the two, syphilis is the more important. If not treated in time and

adequately, it produces degenerative changes of a varied character in the internal organs of the body and, in a certain number of cases, it also causes the condition known as the general paralysis of the insane. The disease is transmissible from parent to offspring and is responsible for a considerable proportion of the abortions and premature births that take place. Syphilis accounts also for a large amount of mental deficiency. Gonorrhoea, in its turn, contributes to ill-health through joint troubles and various conditions affecting the genito-urinary organs in both sexes. In women it may produce sterility.

Our Recommendations

161. The measures which are necessary for the control of these diseases may be divided into two broad groups, namely, (1) those which provide the best available forms of medical care, preventive and curative, and (2) those which are designed to discourage promiscuity and to control prostitution.

162. Our recommendations under (1) include the provision of free and confidential treatment to all persons seeking such treatment, of facilities without payment of fees for personal prophylaxis and of adequate facilities for the diagnosis of these diseases as well as the creation and maintenance of a follow-up service and educational work among the people in regard to their spread and control.

163. Measures designed to discourage promiscuity in the community and to control prostitution are obviously more difficult to devise and enforce than the medical measures recommended above. Education in a wide sense of the term, so as to promote the growth of the individual's moral sense and of his responsibility towards himself and the community, and sex education intended to create a correct appreciation of the problems of sex relationship and to impart knowledge regarding the spread of venereal diseases and the dangers that arise from them, must together provide the conditions essential to secure the success of any attempt to control indiscriminate sexual intercourse, whether it be in the restricted field of prostitution or outside it. We have proposed the gradual provision of sex education to all sections of the community, such provision starting first with teachers in training schools and colleges and, through them, extending to school children and college students. Steps for controlling prostitution are also suggested. These include the enforcement of severe penalties on those who keep brothels and on landlords who promote the use of their premises for this purpose. As regards the prostitute, our recommendations are intended to provide her with adequate medical treatment for venereal diseases as well as to help her, through educative work, to return to the normal mode of life.

Hook-Worm Disease

164. The hook-worm produces its harmful effect on the human host by the loss of blood it causes through feeding on him, by irritation of the bowels which it produces and the resulting disturbance of the digestive function and by the secretion of a poisonous substance which prevents the clotting of blood and thus promotes bleeding. The disease is widely prevalent in India. The labour populations in Assam and certain parts of South India and of the plantations in Coorg are heavily affected as well as the general population of certain parts of Travancore, Malabar and South Kanara. Varying intensities of infestation are found in the provinces of Bengal, Bihar, Orissa, the eastern portion of the Central Provinces, some parts of the United Provinces and the Punjab and on the east coast of Madras. The North-West Frontier Province, Rajputana, Sind, Kathiawar, Central India States, Hyderabad, Deccan and Mysore State are practically free.

165. Our recommendations regarding the provision of adequate arrangements for nightsoil conservancy in rural and urban areas will, if implemented, constitute an important step towards the control of hook-worm disease. Soil pollution through human excreta and the habit of walking barefoot constitute the two main factors responsible for its spread. What is therefore needed is that the people should be taught how to render these factors inoperative. The health education campaign, which we hope will be conducted in the schools and colleges and among the general population as an essential part of our programme, should help materially towards this end. In the meantime mass treatment, by the administration of the appropriate drugs, should be carried out among the heavily infested groups of the population. The simultaneous development of a system of nightsoil conservancy for such communities, on lines suited to local conditions, is also necessary.

Filariasis

166. The disease leads to the permanent swelling of the legs and certain other parts of the body, besides causing recurring attacks of fever and inflammation of the lymphatic system. It is responsible for a considerable amount the preventible suffering and disability, although it does not cause death.

167. Bengal is the most heavily affected province in India. The incidence of filariasis is high in the western districts of this province and its intensity gradually decreases eastwards and northwards. The Chittagong Hill Tracts and the northern districts of Jalpaiguri and Darjeeling are free. In Assam the disease is present in many districts, although its intensity is lower than in Bengal. In Bihar its incidence is relatively high in the Gangetic plain and in Orissa in the coastal districts. In Madras areas of moderate prevalence exist in the districts of Tanjore, Kistna, Godavari.

and Vizagapatam and in Saidapet near Madras City, while the coastal tracts of Malabar and South Kanara districts and of the Indian States of Travancore and Cochin show areas of high incidence.

168. Extended research has failed to produce a satisfactory cure for this disease. The only effective measures against it known at present are those which are concerned with the control of the carrier species of mosquito. In the affected areas it is therefore essential that adequate control measures should be undertaken in order to secure an effective reduction in the mosquito population.

Guinea-worm Disease

169. Guinea-worm disease is widely prevalent in certain districts of the North-West Frontier Province while its incidence is relatively low in the Punjab. The Rajputana desert is free but many of the States in Rajputana and Central India contain heavily infected areas. In the Central Provinces, Bombay Presidency, the Nizam's Dominions and Madras Presidency the disease is prevalent over wide areas. Well watered tracts, with a fairly heavy rainfall such as Bengal, are generally free.

170. The prevalence of the disease is dependent on opportunities for the infection of water supplies by persons harbouring the worm. In the affected areas step wells, tanks and other sources of water liable to contamination are responsible for keeping up the infection and the application of lime to such water supplies has been shown to be effective in sterilising them.

Cancer

171. Such evidence as is available seems to suggest that the relative incidence of cancer in India is probably as high as in western countries. As regards the causative factors "whether it be the cervix, the oral cavity, the penis, the skin or the gastro-intestinal tract, the factor of irritation seems to excel all other possible causes and brings the problem of this fell disease within the scope of preventive medicine."

172. Our proposals for the short-term programme are :—

- (1) Provision for radium and for deep x-ray treatments should be made, in addition to existing centres for such treatments, at all the hospitals associated with the present medical colleges and with those which will be established during the short-term programme. The centres at which such facilities are now available are shown in Appendix 20 of Volume III of the report.

- (2) In addition to the Tata Memorial Cancer Research Hospital at Bombay, three more institutions for promoting advanced research and teaching in the subject are needed to serve North-Western, Eastern and Southern India respectively.
- (3) A considerable extension of diagnostic facilities will be necessary. The laboratories attached to the secondary unit hospitals, the provincial public health laboratory organisation with its regional branches, which we have recommended in the chapter on medical research, and the special institutes referred to above should all help to provide this extended service.

Mental Diseases and Mental Deficiency

173. Conditions of mental ill-health may be divided into two broad groups, (1) mental disorder, and (2) mental deficiency. The former may be either inherited or acquired and very often it is both. No age is exempt from mental disorder, although the types may vary at different age periods. A large proportion of these patients is amenable to modern methods of treatment.

174. Mental deficiency is ascribed, on the other hand, to a hereditary or congenital taint or to some accident or illness occurring just before or soon after birth. Although the condition is generally regarded as incurable, by proper care and supervision the majority of defectives can be made to lead useful but segregated lives, and they can also be prevented from becoming criminals and, in the case of girls, social menaces.

175. In England and Wales there were, at the beginning of 1937, about 129,750 patients under treatment in mental hospital, a proportion of 3.2 mental patients per thousand of the population. In America, the annual admission rate has varied from 5 to 8 per thousand in different years and in different States. In India there is no reason to believe that the rate of incidence of mental diseases is in any way less than those for England and the United States. While certain factors which are operative in those countries may not affect India to the same extent, other factors such as chronic starvation or under-nutrition, tropical fevers, anaemias and frequent childbirth in women, who are unfit for motherhood, are responsible for large numbers of mental breakdown in this country. In view of these considerations, even if the proportion of mental patients be taken as 2 per thousand of the population in India, hospital accommodation should be available for at least 800,000 mental patients as against the existing provision of a little over 10,000 beds for the country as a whole. In India the existing number of mental hospital beds is in the ratio of one bed to about

40,000 of the population (taking the present population of the country as 400 millions) while, in England, the corresponding ratio is approximately one bed to 300 of the population.

176. As regards the possible numbers of persons suffering from varying degrees of mental disorder, who may not require hospitalisation and yet should receive treatment, and of those suffering from mental deficiency, it seems almost certain that the numbers are likely to run into several millions in this country, if the rate of incidence in England or America can be taken as even an approximate guide for making estimates for India.

Our Proposals

177. As against this background of mental ill-health the existing provision for the medical care of such patients is altogether inadequate and unsatisfactory. We therefore make the following recommendations for the short term programme :—

- (a) the creation of mental health organisations as part of the establishments under the Director General of Health Services at the Centre and of the Provincial Directors of Health Services ;
- (b) the improvement of the existing 17 mental hospitals in British India and the establishment of two new institutions during the first five years and of five more during the next five years ;
- (c) the provision of facilities for training in mental health for medical men in India and abroad and for ancillary personnel in India; and
- (d) the establishment of a Department of Mental Health in the proposed All-India Medical Institute.

178. (a) The creation of mental health organisations as part of the establishments under the Director General of Health Services at the Centre and of the Provincial Directors of Health Services.—The creation of mental health organisations as part of the establishments of the Director General of Health Services at the Centre and of the Provincial Directors of Health Services is, in our view, of such great importance that we have placed it first among our recommendations. So little information is available regarding the incidence of mental ill-health in the country and the developments in this field of health administration, even in the more progressive countries, are so recent that we feel we shall not be justified in attempting to make detailed recommendations regarding the mental health organisation which the country requires. We must leave this task to the health departments with the guidance of the specialists, whose appointment we have suggested.

179. (b) The improvement of the existing 17 mental hospitals and the establishment of two new institutions during the first five years and of five more during the next five years.—Radical improvements should be made in the existing mental hospitals in order to make them conform to modern standards. Provision should also be made for all the newer methods of diagnosis and treatment. Apart from such remodelling of existing mental hospitals we recommend the creation of 7 new institutions during the short-term programme, of which at least two should be established as early as possible during the first five-year period.

180. (c) The provision of facilities for training in mental health work for medical men in India and abroad and for ancillary personnel in India.—Nowhere in this country are available all the facilities necessary for the starting of a course for the Diploma in Psychological Medicine. We recommend that, as early as possible, courses of training for this Diploma should be developed in Bombay and Calcutta in association with the universities concerned. We also suggest that, as soon as possible, similar diploma courses should be developed in the universities of other provincial capitals. In the meantime a certain number of carefully selected medical men, with some experience of work in mental hospitals in India, should be sent abroad for training. Provision should be made for sending at least 20 doctors during the first five years and another 20 during the second five years of our programme.

We have also made proposals for developing training facilities for non-medical mental personnel, including such workers as occupational therapists, psychiatric social workers, psychologists, nursing staff and male and female ward attendants.

181. (d) The establishment of a Department of Mental Health in the proposed All-India Medical Institute.—This Department is calculated to promote (1) the development of facilities for the under-graduate and postgraduate training of doctors in all branches of psychological medicine and the demonstration to the provincial authorities of the standards to be aimed at when similar facilities are created by these authorities in their own territories, (2) the promotion of research in the field of mental health, and (3) participation in the organisation of a mental health programme for the area in which the Institute is located.

ENVIRONMENTAL HYGIENE

182. Under this head we deal with the subjects of (a) town and village planning, (b) housing, rural and urban, (c) water-supply, (d) general sanitation, including conservancy and drainage, (e) river and beach pollution, (f) control of insects, rodents and other vectors of disease, and (g) control of trades dangerous and offensive to the community.

Town and Village Planning

183. Most of the populated rural and urban centres in the country have grown up in the past without due regard to the principles of planning. In the postwar period new large scale industrial developments, the execution of large public works and other activities will, in all probability, help to create new townships and settlements and thus further the process of urbanisation. It is, therefore, essential to regulate the growth of towns in accordance with the principles of sound town planning, to make a determined effort to eradicate existing slums and to prevent conditions in which they can again grow and thrive.

Our Recommendations

184. (1) A Ministry of Housing and Town and Village Planning should be established in each province as only in this way can the subject receive the attention which it demands. At the centre we are not suggesting the creation of such a Ministry because the direct responsibility for planning and execution will rest with Provincial Governments. But there should be at the Centre an expert in town planning who, for the purpose of administration, may be attached to the establishment of the Director General of Health Services under the Ministry of Health. This officer should be the consultant to other departments of Government such as the Railways and Posts and Telegraphs. All requests from the provinces for financial support from the Centre in respect of their town and country planning schemes should be scrutinised by him from the technical point of view. The Central Directorate of Town and Village Planning should also function as an information bureau for town planners throughout the country.

185. The Provincial Ministry of Housing and Town and Village Planning should have a technical expert as its adviser, who may be called the Director of Town and Village Planning, with suitable subordinate staff under him. All local authorities, improvement trusts, building societies, industrial organisations, private estate development concerns and government departments should submit their schemes for such development or slum clearance, if they come within certain prescribed standards, to the Provincial Ministry of Housing and Town and Village Planning for previous sanction. The Director of Town and Village Planning will be responsible for the technical scrutiny of all these schemes.

Town and Village Planning Legislation

186. Legislation to regulate planning in respect of towns exists in the provinces of Madras, Bombay, the Punjab and the United Provinces. But, as far as we are aware, no such provision

exists in respect of rural areas. We consider that legislation should be enacted in all the provinces on a fairly uniform basis and that it should include, within its scope, both urban and rural areas. We therefore suggest that the Central Government should, in consultation with town planning experts, draw up model legislation and recommend its adoption by the provinces or, with their approval, secure the enactment of an all-India measure. In either case, the proposed legislation should include all the requirements that modern conceptions regarding town and village planning would suggest for incorporation.

Planning in Urban and Rural Areas

187. Large cities.—In some of the larger and more congested cities in India improvement trusts have been engaged, for some time, in slum clearance and the improvement of housing. The results have not, however, been satisfactory in a number of cases, because cleared areas resulting from costly demolition operations have been allowed to be built over without adequate control. The existing legal and administrative-procedure should, where necessary, be so modified as to ensure that such undesirable developments are not permitted to continue. We recommend that improvement trusts should be established in all the larger cities of the country for dealing with slum clearance and rehousing problems. One of the handicaps from which existing improvement trusts suffer is lack of technical assistance. Every trust should be required to employ a town planner on its staff as soon as trained personnel of this class becomes available in sufficient numbers.

188. Other urban areas.—The urban areas for which the establishment of improvement trusts is likely to be considered not feasible will, from the point of view of size and importance, be such as to make them suitable for inclusion in the district health organisation we have proposed earlier. The local authority that should be made responsible for the planning of such urban areas should be the District Health Board. This authority should, as in the case of an improvement trust, be required to maintain on its establishment a trained town planner.

189. Rural areas.—In the early stages of our programme it will be difficult to extend planning operations into the rural areas as a whole. During this period, attention may be confined to the lay-out of new villages which may be established as the result of developments in industry, mining, agriculture or the settlement of demobilised personnel. In the case of all new villages, the Provincial Director of Town and Village Planning should be consulted beforehand by the department concerned and he should design the lay-out.

Location of Industry

190. The haphazard location of industries in inhabited areas must be controlled by proper legislation. Legal provision exists in certain provincial Local Self-government Acts for enabling the local authority to regulate their location within their areas. We desire to see adequate provision for controlling the location of industry included in the proposed model legislation for town and village planning. Our suggestion that the lay-out of any new industry should be submitted to the Ministry of Housing and Town and Village Planning for previous approval should also apply to residential accommodation provided for industrial workers. A colony for such workers should not be permitted on a temporary basis for a longer period than three years and, even during this period, adequate provision should be made for such amenities as roads, water, drainage, sanitation and lighting.

Training Facilities for Town Planners

191. We make two recommendations. One is that a certain number of selected individuals should be sent to Europe and America for training in the subject. The other is that town planning experts from abroad should, if necessary, be recruited on short-term contracts and that training centres should be set up at least in a few universities in the country.

Housing, Rural and Urban

192. Housing conditions in India present a deplorable picture. The impressions that we gained during our tours indicate extremely unsatisfactory conditions of housing in some rural and urban areas and, in particular, appalling conditions of overcrowding in industrial centres. The single room tenement is a common feature of even many of the more recently constructed housing accommodation in industrial areas. Such tenements often house more than one family and, in any case, have to serve as living room, kitchen and bed room. The sanitation of these dwellings is usually inadequate and of a very rudimentary nature. Thousands of workers have been drawn to these industrial centres by new war industries or by the expansion of old ones, but little attempt has been made to provide the additional accommodation required. The result is that conditions in Calcutta, Bombay, Madras and Kanpur, to mention only a few cases, are indescribable and intolerable. Thousands are without any home or shelter and have to live and sleep on pavements, verandahs, open spaces, under trees, in cow sheds or in any temporary shelter.

Recent Housing Developments in Western Countries

193. Between the two world wars the provision of adequate housing for the people was recognised in most European countries.

as an urgent and important social problem and Governments accepted the view that "housing has become a public utility" and that "the right to live in a decent dwelling has taken its place in the "national minima"—the right to good and abundant water, to sanitation, to adequate fire and police protection, to the use of paved and lighted roads, to education, to a certain amount of medical care, and, in most European countries, to various forms of social insurance". These national housing schemes have certain features which include control by the public authority over housing standards and financial aid directed towards promoting the building of houses of the required quality and in sufficient numbers, and the maintenance of the scales of rent at reasonable levels.

Our Recommendations

194. In India a long-term policy, comprehensive in scope and modern in outlook, is essential for a satisfactory solution of the housing problem. The objective to be attained is the creation of hygienic houses in adequate numbers and of adequate size, in "sanitated" areas equipped with all the facilities necessary for community life. In the execution of the housing programme Governments and public authorities should perform the following functions:—

- (i) the planning, execution and regulation of housing programmes, including participation by local authorities and improvement trusts in house construction and maintenance;
- (ii) the grant of financial assistance by long-term loans at low rates of interests, or grants-in-aid;
- (iii) the prescription and enforcement of standards; and
- (iv) the promotion of housing research.

195. Functions of the Provincial Governments.—Upon Provincial Governments must rest the primary responsibility for dealing with housing and town and village planning. The housing of the people is essentially a State responsibility. It may, of course, be delegated under suitable conditions and in defined areas, to local bodies or public authorities such as improvement trusts. Elsewhere it will be necessary to utilise every available agency if a comprehensive programme is to be planned and executed within a reasonable time. Provincial Governments should consider the establishment of a statutory body, under the direction and control of the Ministry of Housing and Town and Village Planning, with financial resources and power to plan and execute a province-wide house construction and town and village development programme on a 20—30 years plan, in five yearly stages. The Provincial Ministry of Health is deeply concerned in the proper

execution of any housing schemes and should be responsible for the control and enforcement of minimum standards in the design and construction, not only of houses but also of environmental amenities, such as water supply, sanitation and recreation. The two Ministries must work in close co-operation with one another and the staff of the Ministry of Health must, at all stages, be in contact with those who are responsible for the execution of housing schemes and town and village planning.

196. Functions of the Local Authority.—Our recommendations for provincial and district health administration, will, if implemented, establish certain new local authorities in the place of existing ones. We visualise the creation of separate district organisations to deal with health, education, public works, and communications, in order to provide more favourable conditions for efficient administration. In carrying out a province-wide housing and planning policy in urban and rural areas, the work of enforcement of standards, from the health point of view, will fall upon the district health organisation and its officers. On the other hand, the actual construction and maintenance of housing colonies will be carried out by the district agency which deals with public works and which, in this connection, will be under the control of the Ministry of Housing and Town and Village Planning or the authority to which the Ministry has delegated its powers.

197. Housing standards.—We have set out certain general recommendations regarding the minimum standards to be prescribed for all houses built under public or private auspices. For details regarding these standards reference may be made to paragraphs 25 to 33 of chapter XIII of Volume II of our report.

198. Type plans.—The legal enforcement of housing standards is only one method of approach towards raising the quality of construction. Type plans and estimates covering a considerable range of cost, material and sizes should be prepared. These plans and estimates should be based on local rates of cost, as far as possible, and should incorporate locally procurable material and they should be made readily available to the general public.

Housing for the Lower Income Groups

199. We believe that an India-wide housing programme should give first priority to the needs of the lower income groups of the population. It is not easy to fix an upper limit of income suitable for all provinces. In the South it might be Rs. 100 to 150 a month and in the North Rs. 150 to 250. The limit would have to be fixed by each Provincial Government.

200. Urban areas.—In many towns and cities industrial workers live interspersed with the general population and the housing problem must therefore be considered for the community as a whole and not for industrial workers only, bearing in mind the income levels we have suggested for defining the working class population. We believe that future developments in the housing sphere will be regulated on proper lines if such developments are undertaken under public auspices, particularly in the larger urban centres. We have already said that the responsibility for providing houses for the people rests on the Governments of the country. Local authorities and industries should, no doubt, bear their share of the cost, but the State cannot escape the fundamental responsibility.

201. Rural areas.—The housing problem in rural areas presents special difficulty. The Governments concerned, through such local authorities as may be suitable, should be responsible for enforcing minimum standards in any new village construction. They should also assist, with finance, advice and example, in the improvement of existing houses in rural areas. Type designs for new houses and suggestions for the improvement of existing ones should be made available to the villagers through the Health and other appropriate Departments. As in the case of housing in urban areas. Governments should be prepared to finance or assist in financing any approved schemes for new housing or housing improvement, whether sponsored by the Governments themselves, by local authorities, by co-operative banks or societies or by private interest. Governments must, however, exercise control over the planning and execution of such schemes and, in particular, over the rents to be charged for new houses, and any increase in the existing rents in the case of housing improvement.

Water Supply

202. According to the 1939 report of the Public Health Commissioner with the Government of India only 253 towns out of a total of 1,471 towns of all sizes in British India possessed protected water supplies. The population served by these was about 12.7 millions or 48.7 per cent. of the aggregate population of all the towns, but only 4.5 per cent. of the total estimated population of British India in that year.

Rural water supplies are drawn mostly from wells, tanks, rivers and streams and they are almost completely unprotected.

Our Proposals

—203.—A vigorous policy should be adopted immediately by Governments for the development of a water supply programme, which should aim at providing the entire population under their

charge with safe water for drinking and domestic purposes within a period of about 35 years. The initiation of the scheme should not be left to local authorities and sufficient funds should be made available to complete the programme within this period. Technical bodies, which may be designated Central and Provincial Water and Drainage Board, should be established in order to assist Governments in the planning and execution of water and drainage schemes on a comprehensive scale.

204. Functions of Water and Drainage Boards, Central and Provincial.—The Central Board will perform the dual task of carrying out, in the Central Administered Areas, the same duties which the Provincial Board will perform in its own territory as well as of dealing with various matters of interest and importance to more than one province, such as the conservation of water on an all-India basis and inter-provincial problems of drainage and river pollution. In addition, the Central Board will assist the Central Government in carrying out its general policy of promoting co-ordinated effort in the provinces and of giving financial aid and technical advice in the furtherance of their water and drainage schemes.

205. The more important among the functions to be performed by the Central and Provincial Boards in their respective areas include (1) the conservation of the available sources of water in their respective territories and its allocation to the different needs of the community, (2) the general planning of water supply and drainage schemes and the preparation of a priority list in respect of such schemes, (3) various technical matters such as the standards to be prescribed for the purification of water and sewage, the training and registration of water operators and the investigation of special local problems such as the purification of trade wastes, removal of fluorides, etc., and (4) the recommending of grants to the Governments concerned for water and drainage schemes.

Water Conservation on an Inter-provincial Basis

206. The importance of this question was forcibly brought to our notice by the Superintending Engineer, Public Health Engineering Department, the United Provinces. He said "the depletion of the main rivers in this province, particularly the Jumna and the Ganges, by the wholesale extraction of large quantities of water by the Irrigation Departments of the Punjab and the United Provinces, has had very serious repercussions on the water supply of several large towns in this province, particularly Agra and Cawnpore." He also pointed out that it has aggravated another problem, namely, large scale river pollution from trade wastes.

207. The question of conserving all the available sources of water throughout the country and of so allocating the supply, from a common source, to meet the reasonable demands of individual provinces concerned, is of paramount importance from the standpoint of the health and general welfare of the people and we have come to the conclusion that this matter calls for special consideration. Where an urgent decision on such a matter is required, the Central Government should be empowered to give a temporary decision which should be binding on the provinces concerned, until a final settlement is reached through the award of an Arbitration Board or any other suitable body to which reference should be made with the least practicable delay. We consider that the same procedure should apply to inter-provincial problems of river pollution by trade wastes and sewage. Even when an urgent decision has to be taken by the Central Government we consider it necessary that such decision should be taken only after consulting the Central Water and Drainage Board and the Central Board of Health in regard to the technical and administrative aspects of the question.*

208. As regards the other subjects included under the heading "Environmental hygiene" such as general sanitation, river and beach pollution, control of insects, rodents and other vectors of disease etc., we have set out detailed proposals in the relevant portions of chapter XIV of Volume II. These, if implemented, will, it is anticipated, make for a considerable improvement of the existing unsatisfactory state of affairs.

QUARANTINE

International Quarantine

209. As regards international quarantine two aspects require consideration. One is prevention of the export of infection in respect of the diseases recognised under the International Sanitary Conventions and the other is that of protecting India from the possible introduction of diseases such as yellow fever, sleeping sickness and others from which the country is at present free. In regard to both the measures now enforced in India are considered reasonably complete and satisfactory.

210. The ratification of international treaties should be one among a small group of subjects in respect of which the Centre should be given the power to compel a province to fall in line with the other provinces. The fact that international air line

*Mr. P. N. Saprú does not agree with the above recommendations for dealing with these difficult problems. He has dealt with his view in a note which is appended to Chapter XIV of Volume II of our report. The views of the rest of the Committee on Mr. Saprú's note will be found in paragraph 22 of the same chapter.

pass through different provinces in the country necessitates action on common lines in respect of the health requirements of airports and their surrounding areas and it is therefore essential that the Central Government should be able to carry out a common policy throughout India.

Internal Quarantine

211. Internal quarantine is concerned with the enforcement of measures designed to control the spread of infectious diseases between neighbouring units of administration, namely, the provinces and Indian States. We make the following recommendations:—

212. (1) The Central Government should be responsible for the enforcement of all measures necessary to prevent the inter-provincial spread of infectious disease. In this connection India may well follow the practice which is in existence in the United States of America. In that country "the Federal Health Service has control of sanitation in interstate traffic including supervision of the sanitary facilities on all interstate vehicles. The Federal Government also assist the States in the control of communicable diseases within their own territories, if desired to do so. The Central Government in this country should be similarly empowered to control the inter-provincial spread of epidemic diseases.

213. (2) The Central Board of Health should draw up, in consultation with the health advisers at the Centre and in the Provinces, a memorandum of instructions to be followed by the Central and Provincial health departments in order to promote the effective control of the spread of infectious diseases. The whole field of possible co-operation should be examined on a wide basis and a common programme of action drawn up under the auspices of the Board.

214. (3) The desirability of creating an inter-provincial fund for carrying out the measures outlined above should be considered, the Central and Provincial Governments making their contributions to this fund on some agreed basis. Such a fund will also constitute an insurance for all Governments against possible disasters such as famines, floods and earthquakes.

215. (4) The measures described above for the enforcement of internal quarantine can hardly be effective without the active participation of Indian States. Such participation can be of value only if those States possess a reasonably good health organisation. The more important of the States probably satisfy this condition. If, in the beginning, even these can be brought into the scheme by mutual arrangements between British India and the States, the range of activity of the internal quarantine organisation and its effectiveness will have been greatly increased.

VITAL STATISTICS

216. Errors in existing vital statistics in India fall under three heads, (1) incompleteness in the recording of the events, (2) inaccuracy of the registered cause of death and (3) faulty compilation. Registration of vital statistics in all municipalities is, generally speaking, a function of the municipal public health department. In the rural areas, in most provinces the Registrar is the police officer in charge of the *thana* (police station) and the person responsible for reporting births, deaths and cases of notifiable diseases from individual villages is the *chowkidar*, who is perhaps the lowest grade of public servant and is generally illiterate. In the province of Madras the Registrar is the headman of each village.

217. The recorded vital statistics are passed on, through a series of officers, to the Director of Public Health in each province. Compilation of the data is carried out at the different stages of transmission. Madras forms an exception to this general statement. Here the number of intermediary stages has been reduced, the village headman passing on his report to the *Tahsildar* of the *taluk* in which the village is situated and the latter sending it directly to the Director of Public Health. Compilation of the data for the whole province has been centralised in the office of the latter officer. This system has been found to be satisfactory and has been recommended to other provinces by the Central Advisory Board of Health.

RECOMMENDATIONS

The Areas served by our short-term Programme

218. The creation of four registration offices in each primary unit.—The placing of the registering authority as close as possible to the people is desirable in order to improve vital statistics. We therefore recommend the establishment of four registration offices in each primary unit, one of these being at the headquarters of the unit. The public health nurses and midwives should be made Registrars of Births and Deaths and should be responsible for ensuring that these offices are kept open on the required dates and during the stated hours.

219. All the members of the public health staff employed in the primary unit should systematically check the birth and death registers by house to house enquiry, when they visit villages on their routine duties. In addition, we anticipate that the village committees we have suggested will help to bring on record events which might escape the notice of the *chowkidar* as well as to awaken, in the villagers, a sense of personal responsibility in regard to registration.

The Areas outside our Short-term Programme

220. We recommend the employment of non-medical personnel with some elementary type of training, as Registrars in the areas to which our health programme is not extended. Each man's range of jurisdiction should be limited to such a number of villages as would enable him to visit all of them within a period of about 6 days. During three days in the week he should attend the registration office and the remaining days should be devoted to an inspection of the work of the *chowkidars* in the villages within his area.

Certain Other Proposals

221. (a) House lists in villages and sample survey.—We recommend the preparation and maintenance of house lists for individual villages. The list should contain information regarding the name, date of birth and sex of the head of the family and of every normal resident of the house. It should be made obligatory on the householder to give the information required for the filling of the house list, should he be asked by the appropriate authority to do so.

In a subcontinent like India the use of the sampling method is eminently suitable for the collection of demographic information of various types and the provision of an accurate house list for each village will prove invaluable for sample surveys.

222. (b) The provision of adequate incentive to the people for the registration of births and deaths.—An effective method of stimulating interest in the people for the registration of vital statistics will be by creating conditions requiring, in an increasing degree, the production of proof of age, community, parentage etc. If courts, schools etc. could be induced to insist on the production of birth and death certificates the public will begin to feel the necessity for registering births and deaths in their own interest.

223. (a) Compulsory registration of vital statistics.—In the areas in which our scheme will be introduced registration of vital statistics should be made compulsory along with the introduction of the scheme, wherever such provision does not already exist. In other areas compulsion should be introduced gradually. The enforcement of the law through the prosecution of offenders is essential if definite improvement is to be secured.

Administrative Organisation

224. The central organisation.—We recommend the appointment of an officer with the title of Registrar General of Vital and Population Statistics. He will be attached to the Central Ministry of Health and will be responsible for the collection, compilation,

study and publication of vital statistics from all parts of the country, for the carrying out of the census at periodical intervals and for continuous population studies. He will work independently of the Central Health Department but in close co-operation with it. He should publish an annual report on the population of India incorporating such information as is available regarding existing conditions and possible tendencies for the future.

A "medical section" should be created in the Registrar General's office for the purpose of providing statistical help to the Central Health Department in its day to day administration and in the carrying out of special investigations.

225. The provincial organisation.—The provincial statistical organisation should correspond to that proposed for the Centre and the functions of the provincial officer in charge should be similar to those of the Registrar General. The designation of the provincial officer may be the Provincial Registrar of Vital and Population Statistics. He should be attached to the Provincial Ministry of Health for administrative control and should work independently of, but in close cooperation with, the Director of Health Services.

The provision of "a medical section" in the office of the Provincial Registrar for the same functions as those suggested in connection with the Central Health Department is also necessary.

We have also made suitable recommendations for a district vital statistics organisation, which will work under the control of the Provincial Registrar.

226. The employment of statisticians in increasing numbers will become necessary in the vital statistics, health and other departments of Government. Industry is also likely to employ a growing number of persons trained in modern statistical methods. In the circumstances we recommend the development of facilities for statistical training of a high order in the universities and in certain other centres.

PROFESSIONAL EDUCATION

227. Our main object during the short-term programme should be the provision of adequate numbers of trained staff in all categories, in order to facilitate the development of our health programme with the least possible delay. Before indicating briefly our proposals for the expansion of existing provision for professional education in the field of health, we may consider certain general questions which are relevant to the subject.

The Target in regard to the Production of Doctors

228. We have placed the target, at the end of the first ten years of the programme, in regard to the production of doctors

at an annual output of 4,000 to 4,500 as compared with less than half that number of graduates and licentiates combined now being produced each year. To man the new medical colleges with suitable teaching personnel we anticipate that the All-India Medical Institute, the establishment of which we are recommending, will provide a steady, if limited, stream of teachers of the highest quality. In addition we have suggested that at least 200 carefully selected persons should be sent for overseas training in order to equip themselves for filling teaching posts in the country.

The Type of Doctor for the Future

229. Having given serious consideration to the suggestion that in the conditions now prevailing in the country, it might be desirable to provide both fully trained doctors and a less elaborate type of medical man, the conclusion which the majority of us arrived at is that, having regard to the limited resources available for the training of doctors, it would be to the greater ultimate benefit of the country if these resources were concentrated on the production of only one and that the highly trained type of physician whom we have termed the "basic" doctor.*

Admission to Medical Colleges

230. We feel that, as far as possible, the applicants best qualified to make use of the opportunities provided should be admitted into the medical colleges. We realise that there are

*Six of our colleagues (Sir Frederick James, Dr. Vishwa Nath, Messrs. Sapru and Joshi, Pandit Maitra and Dr. Butt) agreed to the advantage of having one single type of medical practitioner, but in view of the overall shortage of doctors, felt that the early realisation of this ideal must be sacrificed to the immediate needs of the country. In their view the imperative and fundamental need in India was the large scale production of trained medical personnel of all kinds and to that end were prepared to use every possible means, including the adoption of a shorter licentiate course to increase, both rapidly and substantially, such personnel.

The majority view, while recognising the need for as rapid an expansion of medical personnel as possible, has taken note of the fact that the "basic" doctor will receive adequate training in the community and preventive aspects of medicine and that he will, therefore, be much better equipped for fulfilling the functions which have been proposed for a medical officer in our programme than a licentiate with his more limited background of general education and of professional training. Moreover, the "basic" doctor, supported by adequate and efficient technicians and other ancillary personnel, is capable of extending his sphere of public utility to an extent which would be beyond the capacity of a less efficiently trained person. It seems therefore likely that the anticipated advantage from a larger out-turn of doctors by the continuance of the licentiate course will be largely counter balanced by the more efficient and extended service which the "basic" doctor will be able to provide. It is also considered that the production of two types of doctors is to be deprecated on general grounds, because the person with a lower status naturally tends to develop an inferiority complex and a chronic discontent which cannot but be inimical to good work.

A separate note favouring the continuance of licentiate teaching by Drs. Vishwa Nath and A. H. Butt is given in Chapter XVIII of Volume II of the report. On the other hand, three other members (Drs. Amesur, Narayanrao and Wadhvani) consider that admissions to medical schools must be stopped forthwith and that such medical schools as can be up-graded should be converted into colleges even before improvements to existing colleges are carried out. Their note will also be found at the same place in Chapter XVIII.

factors which militate against the application of this principle in its entirety and that communal considerations cannot perhaps be ignored in the present state of the country. We suggest that one-third of the admissions to every medical training institution should be by pure merit and that the remaining seats may be divided among all the communities, provided the best candidates from each community are selected.

231. In view of the importance of increasing to a large extent the number of women doctors in the country we recommend that about a quarter to a third of the admissions in the medical colleges should be reserved for suitable women candidates, if they are available.

Stipends to Medical and Nursing Students

232. In Russia medical education is free and in the United Kingdom, the Goodenough Committee has recommended that one-third of the admissions to medical schools should be free. In order to prevent economic barriers standing in the way of suitable persons entering the medical profession we would like to see that all those, who are willing to enter the public service after successfully completing their course, should be given an annual stipend of Rs. 1,000, a part of its being recovered from them later in easy instalments. In view, however, of the large financial outlay that this proposal involves we have included, in our estimates, provision only for 50 per cent. of the entrants.

The need for nurses is even greater than that for doctors, there being probably no more than 7,000 registered nurses at present in the country as a whole. On the other hand the implementation of our short-term programme will require approximately 80,000 nurses. We have suggested the provision of a stipend of Rs. 60 per month for pupil nurses, a part of the amount thus advanced being eventually recovered from them in easy instalments.

Medical Education

Undergraduate Education

233. Considerable thought has been given by us to the type of training necessary for the evolution of the "basic" doctor and advice was sought from a strong and representative panel of experts in the field of medical education from different parts of the country.* The main ideas underlying the changes recommended in the undergraduate curriculum include a reorganisation of the teaching both in the pre-clinical and clinical fields a reduction in the hours of didactic instruction in certain subjects and an emphasis on the inclusion of principles and methods which will enable the student to learn for himself, think, observe and draw conclusions;

*For detailed information regarding our proposals reference should be made to the relevant sections in Chapter XVIII of Volume II of the report.

the establishment, in every medical college, of a Department of Preventive and Social Medicine so as to give the student an insight into social health problems by contacts with home and community life and the inclusion of a year of "internship" after the qualifying examination, of which three months will be devoted to work in a public health unit and the remaining period in a hospital of approved standard. Throughout the whole course, the importance of research should be stressed and whole-time teachers should themselves engage in research and encourage any student showing an aptitude or learning towards this important aspect of his work to participate in research.

234. Our programme of expansion of educational facilities includes the improvement of existing colleges, the conversion of suitable medical schools into colleges and the establishment of new colleges in different parts of the country.

Postgraduate Education

235. Postgraduate education should be devised to meet two different needs. They are, (a) the training of consultants and specialists and (b) the training of practitioners desirous of practising a speciality without the definite status of a specialist. In the case of (a) such training will naturally involve several years of work in special departments and hospitals and lead to a higher qualification such as the M.D. or M.S. In the case of (b), the training in the speciality concerned may range from 12 to 18 months under suitable guidance. We recommend that courses should be available in (i) Oto-Rhino-Laryngology, (ii) Dermatology, (iii) Radiology, diagnostic and therapeutic, (iv) Ophthalmology, (v) Obstetrics and Gynaecology, (vi) Venereology, (vii) Anaesthesia, (viii) Psychiatry (ix) Pediatrics (x) Tuberculosis, (xi) Malariology, (xii) Blood transfusion and resuscitation and (xiii) Orthopaedics.

236. We have suggested the establishment of a special organisation, the Central Committee for Postgraduate Medical Education, to be responsible for laying down standards in respect of postgraduate training in particular subjects and for promoting the development of facilities for such education in different parts of the country on a co-ordinated basis. We have also made suggestions for the apportionment of cost of such institutions between the Central and Provincial Governments.

Refresher Courses for General Practitioners

237. One of the most serious handicaps in raising the general standard of medical practice in India is the absence of any provision for refresher courses. There are several lines along which refresher courses may be arranged.

- (i) Whole-time refresher courses which may extend from two weeks to two months. It is desirable to encourage

short-term courses of two to four weeks, as many medical men may not find it practicable to be away from their duties for longer periods.

- (ii) Part-time courses which may be—
 - (a) week-end courses
 - (b) whole-day courses
 - (c) half-day courses
 } spread over weeks or months organised on a systematic basis.
- (iii) One educational session once a week or fortnight conducted throughout the year.
- (iv) Short-term posts in a recognised hospital for periods ranging from one month to three months.

We recommend that facilities for refresher courses should be developed in all hospitals attached to the secondary health centres, district health centres, medical colleges and the headquarters of each province.

238. We have also made recommendations regarding the provision of training facilities in tuberculosis, mental hygiene and dietetics.

Special Provision for Licentiates

239. There are two types of training that may be given, (1) training which will enable licentiates to obtain a university degree and (2) advanced training in the specialities.

240. Courses leading to degree qualification.—The All-India Medical Council has suggested certain changes which some universities have accepted, the result of which will be that the licentiate can within 18 to 24 months obtain the degree of M.B.B.S. Special concessions to those who were serving in the armed forces so that they may, after demobilisation, proceed to a degree have also been recommended. We suggest that it should be the endeavour of every university and every medical college to reserve a sufficient number of places for licentiates so as to enlarge substantially their opportunities to obtain a medical degree.

241. Advanced training for licentiates.—There are at present only a few centres where such training can be obtained by licentiates, the School of Tropical Medicine, Calcutta, and the All-India Institute of Hygiene and Public Health being two institutions which afford opportunities for them to acquire their diplomas. It is also understood that the Government of Madras have introduced special courses in Ophthalmology, Obstetrics and Gynaecology, Tuberculosis and Clinical Laboratory Sciences for licentiates. Such diplomas should be made more freely available to them by other authorities in different parts of the country.

Dental Education

242. We suggest that provision should be made for the training of three types of dental personnel, (1) the dental surgeon, (2) the dental hygienist and (3) the dental mechanic. The responsibility for the training of the dental surgeon will have to be shared between medical and dental colleges, while the training of the other two classes can be undertaken entirely by the dental colleges. In view of the difficulty in obtaining well trained dental teachers during our short-term programme, the number of dental colleges that we propose should be opened in the country is limited. We recommend that dental colleges should be established at Calcutta, Bombay, Madras, Lucknow and Patna and that the dental college at Lahore should be expanded. Each dental college for post-graduate students should be associated with a medical college so that the teachers of the latter can assume responsibility for the instruction of dental students in those subjects which form part of the normal studies of the undergraduate in medicine.

Postgraduate Dental Education

243. Appointments as "house surgeons" should be instituted in all dental hospitals run in conjunction with the medical colleges so that dental training on a salaried basis may be available for graduates. In view of the present shortage of teachers, graduates in dentistry should be encouraged to proceed to a higher degree and provision for this should be made in all universities by the establishment of the degree of Master of Dental Surgery. As a temporary measure dental graduates should be encouraged to proceed overseas to obtain higher qualifications as well as pursue training in special subjects.

Dental Legislation

244. Dentistry as a science can make little progress in the country until it is upheld by suitable legislation directed to compulsory registration and prohibition of practice by unregistered persons. Instead of each province having its own Dental Act, it is suggested that comprehensive all-India dental legislation should be enacted.*

Pharmaceutical Education

245. We consider it necessary to provide educational facilities for three classes of personnel, (1) licentiate pharmacists, (2) graduate pharmacists and (3) pharmaceutical technologists. The first class is intended to provide for the large number engaged in dispensing work in chemists' shops, dispensaries and hospitals. The course for the graduate pharmacist will be designed to train the smaller number who will be engaged in manufacturing concerns,

*Mr. N. M. Joshi is, however, of the view that such legislation is premature and that, if it be passed, it should not be made applicable to those areas where the services of a registered dentist are not available within a reasonable distance.

analytical laboratories and educational medical institutions. The third type of course is for those desiring to take up the manufacture of pharmaceuticals and drugs on a commercial scale. For them there should be, in addition to the graduate course in pharmacy, an additional course of one year in chemical technology, design, equipment, etc.

As soon as pharmaceutical licentiates become available in sufficient numbers the training of compounders should be dispensed with.

Education of Public Health Personnel

Medical Men

246. We have already referred to the setting up in medical colleges of adequately staffed and equipped Departments of Preventive and Social Medicine and the inclusion of a reasonably high standard of training in this important branch of medicine in the curriculum of the undergraduate medical student. The postgraduate training now provided through the Diploma in Public Health will, we believe, largely be incorporated in the future in the course of training for the undergraduate. Postgraduate training in preventive and social medicine will then have, as its objective, the provision of facilities for advanced training in such branches of the subject as malariology, maternity and child welfare, industrial hygiene, public health administration, epidemiology, public health laboratory practice and statistics. Such specialised training may be of two types. The first will be of a limited character and will have as its purpose the equipment of health workers with a reasonable measure of proficiency in the subject concerned, the course of instruction ranging ordinarily from 3 months to one year. The second will be for those who desire to attain the status of specialists in preventive health work. For them the period of training will be from 3 to 5 years, the candidates being attached to the Preventive and Social Medicine Department of a medical college and being associated more and more with the teaching, research and administrative activities of that department, including participation in the field training given to students.

Public Health Engineers and others

247. Our proposals for postwar health development require a large number of qualified public health engineers for the tackling of the problems of environmental hygiene. A beginning in training can be made at the All-India Institute of Hygiene and Public Health, Calcutta, in collaboration with the Bengal Engineering College and the Calcutta University. At a later stage it is proposed that this subject should occupy a definite place in the course

of studies provided at the different engineering colleges so that instruction in public health engineering should form a part of the qualification of all engineers. We have also set out proposals for the training of public health inspectors and public health laboratory workers.

The Training of Nurses, Midwives and Dais

248. The conditions under which nurses have been required to carry on their profession in the country are deplorable. These include lack of professional status, insufficient pay for senior positions, gross under-staffing in hospitals and consequent overwork, deplorable living conditions accompanied by overcrowding and lack of recreational and cultural facilities as well as absence of provision for general superannuation or pension schemes.

249. The number of nurses available in the country is probably about 7,000, while our short-term programme will itself require about 80,000 nurses. Without a considerable increase in their number it is impossible to proceed with the development of hospital and other institutional facilities and with the organisation of the public health nursing service for curative and preventive work in the homes of the people. In Chapter I of Volume I of our report we have suggested that, by 1971, the number of trained nurses available in the country should be raised to 740,000. An essential step towards the achievement of this objective is the removal of the existing unsatisfactory conditions of training and service and we have made proposals designed to remove these conditions.

250. The very large majority of nurses who pass out of nursing schools will be absorbed in the public health services. Even so, there would remain a certain number outside this service. We have in mind such nursing services as are maintained by private bodies including Missions. For those who are in public service, provision for old age and insurance against illness, illhealth and disability will form part of the conditions of their service. We would suggest that, for those who are employed by private bodies, provision should be made through a scheme corresponding to the "Contributory Federated Superannuation Scheme for nurses and Hospital Officers" which was introduced in Great Britain in 1928 and has been, it is understood, functioning satisfactorily.

251. As regards training facilities our proposals include the establishment of preliminary training schools which will give elementary instruction to students who wish to become nurses, midwives, public health nurse and hospital social workers as well as the establishment of successive groups of training centres for nurses. In view of the extreme shortage of nursing personnel we have recommended that the first group of 100 training centres,

each taking 50 pupils, should be started two years before the health organisation begins to be established, that another set of 100 centres should be created during the first two years of the scheme and that a third group of the same number of centres should be established before the third year of the second quinquennium.

251. (a) We have suggested that there should be two grades in the nursing profession with corresponding types of training, a junior grade and a senior grade. The entrance qualification for the former should be, we have suggested, a completed course for the middle school standard and for the latter a completed course for the matriculation.

252. We have also recommended the establishment of nursing colleges in order to provide a five-year degree course in nursing as well as advanced courses in hospital nursing administration, in the teaching of nurses and the training of public health supervisors.

Male Nurses

253. Owing to the existing social conditions and customs in certain parts of India, male nurses will have to play an important part in the health programme. Male nurses and male staff nurses should be trained and employed in large numbers in the male wards and male outpatient departments of public hospitals, thus releasing women workers for other work.

Public Health Nurses

254. We have also made specific proposals in regard to the training of public health nurses. They are fully qualified nurses with training in midwifery also. In addition their educational programme should stress, throughout, the preventive point of view. The curriculum should integrate class room instruction in the science and art of nursing and in social studies with well-planned experience in hospitals, community health services and in the home.

Midwives

255. The number of midwives actually available for midwifery duties in the country is probably 5,000. In order to provide one midwife for every 100 births, approximately 20 times that number or 100,000 midwives will be required for British India.

256. Existing training schools for midwives require considerable improvement. The most serious drawbacks are (1) lack of properly trained and well equipped supervisory staff, (2) lack of facilities for antenatal and postnatal work, (3) lack of domiciliary practice and (4) lack of opportunities for witnessing complicated cases of labour. We have laid down certain fundamental

requirements which should be met before an institution is recognised as a training centre for midwives and have also made detailed recommendations for their training courses.

Dais

257. The continued employment of these women will, for a period, be inevitable. While recognising that attempts to train the *dai* and make her reasonably satisfactory in the practice of midwifery have in many cases failed, the discrepancy between the existing number of midwives and that required to meet the needs of the country is so great that, as an interim measure, the possibility of elaborating a system of training whereby the most effective use might be secured out of this type of personnel cannot be ignored. We have described in some detail the experience that one of us (General Hance) has had in developing a midwifery service through trained *dais* in the North-West Frontier Province, where the scheme achieved a reasonable measure of success. We also understand from another member of our Committee (Dr. Butt) that attempts to improve the normal practice of midwifery by *dais* through suitable training have been equally successful in the Public. We have, in the circumstances, advocated the training of *dais* as an interim measure until an adequate number of midwives will become available and have made certain suggestions for their training for urban and rural practice.

Medical Research

Existing Medical Research Activities

258. Organised medical research at the present time depends mainly on two organisations (1) the Central and Provincial Government Laboratories and the Medical Research Department and (2) the Indian Research Fund Association. The more important institutes and laboratories existing in the country for the promotion of medical research are shown below :—

- (1) The Central Research Institute, Kasauli, (2) The Haffkine Institute, Bombay, (3) The King Institute, Guindy, Madras, (4) The Pasteur Institute of South India, Coonoor, (5) The Pasteur and Medical Research Institute, Shillong, (6) The School of Tropical Medicine, Calcutta, (7) The All-India Institute of Hygiene and Public Health, Calcutta, (8) The Malaria Institute of India, Delhi, and (9) The Nutrition Research Laboratories, Coonoor.

259. Of these, the Central Research Institute, the All-India Institute of Hygiene and Public Health and the Malaria Institute of India are maintained by the Central Government, the Nutrition Research Laboratories by the Indian Research Fund Association and the other institutions, with the exception of the Pasteur Institute of South India, by the Provincial Governments concerned.

The last is the property of the Pasteur Institute Association, a body registered under the Societies Registration Act of 1860, and its management is vested in a Central Committee of which the Surgeon General with the Government of Madras is the Chairman and the Director of the Institute is the Secretary. For information regarding the development of these research laboratories and the work that has been accomplished by them, reference should be made to Chapter XIV of Volume I of our report.

The Medical Research Department

260. The medical research department was established by the Government of India for the provision of a permanent cadre of specially selected and trained officers for the furtherance of research. With the creation of Central and Provincial Government laboratories the officers of this department were appointed as Directors and Assistant Directors of the various Government laboratories. More recently, however, the extended activities of the provincial laboratories have necessitated the employment of workers for special duties and they have been appointed, as required without drawing upon the medical research department. Officers the latter department have been placed on foreign service, from time to time, with other organisations such as the Indian Research Fund Association and the Pasteur Institute Association.

The Indian Research Fund Association

261. The Indian Research Fund Association is a registered association in close touch with the Government of India, from which its funds have been mainly derived. The chief objects of the Association are (1) to initiate, aid, develop and co-ordinate medical scientific research in India, to promote special enquiries and to assist institutions for the study of diseases, their preventive, causation and remedy; (2) to publish papers or periodicals in furtherance of the objects of the Association and (3) to propagate knowledge regarding the causation, mode of spread and prevention of diseases. The entire control and management of the affairs of the Association are vested in a Governing Body, its President being the Hon'ble Member in charge of Health in the Governor General's Executive Council and its Secretary the Public Health Commissioner with the Government of India. The Governing Body appoints a Scientific Advisory Board to advise on technical matters and on allocation of funds, the Chairman of which is the Director General, Indian Medical Service, and the Secretary the Public Health Commissioner. The Association approves an annual programme of research, sanctions grants-in-aid of research and, in certain cases, may constitute special enquiries. An annual conference of medical research workers is normally held, at which the work of the past year is reviewed and proposal for the coming year are put forward.

RECOMMENDATIONS

262. We recommend the constitution of a statutory organisation consisting of :—

- (1) a Scientific Board, which will be the executive machinery of the organisation and
- (2) an Administrative Body which would form the link between the Board and the Government of India and exercise general supervision over the working of the organisation.

The Scientific Board

263. The composition of the Board should include medical research workers of standing and experience, representatives of universities and medical colleges, representatives of the principal scientific bodies in India, prominent workers in the field of public health and clinical medicine, non-medical representatives of allied and fundamental sciences and persons with experience of health administration. The work of the Board should be aided by the formation of an adequate number of expert advisory bodies for special subjects.

Administrative Body

264. The Administrative Body should have the following type of membership:—

(a) the Minister of Health in the Central Government; (b) representatives of the Government Departments of Agriculture, Industry, Labour and Finance; (c) one representative of the Council of State and (d) two representatives of the Legislative Assembly. The Director General of Health Services with the Government of India should be in attendance at all meetings of this body.

The Board would make recommendations regarding the allocation of funds for the furtherance of research to the Administrative Body in which would be vested the power of giving sanction to such allocations.

265. The main functions of the central medical research organisation proposed above should be (1) the formulation of policy in regard to the future development of medical research in India, (2) stimulation of research activities in the provinces, universities and medical colleges and (3) co-ordination of such research activities throughout the country.

266. Our recommendations deal also with future developments in respect of Government research institutes and teaching institutions. In addition we have suggested the provision of improved laboratory services in the different provinces through the

creation of regional laboratories, to be linked locally with other organisations in connection with the health programme and, for technical direction, with the central laboratory at the headquarters of the province. We have also made suggestions regarding the development of research in special subjects such as malaria and nutrition. Investigation into the social and environmental factors affecting health and disease has also been suggested. For information regarding these matters reference should be made to Chapter XIX of Volume II of our report.

The Recruitment and Training of Medical Research Workers

267. The number of suitable medical research workers and facilities for training them are inadequate at present in India and, before any expansion of medical research on a reasonable scale can be undertaken, the primary requirement will be a great increase in the number of properly trained workers. Responsibility for recruiting medical research workers and for the creation of training centres for them must be the primary function of the central organisation for medical research referred to above and we have made certain specific recommendations in this behalf also.

The Manufacture of Biological Products

268. One of the activities of Government laboratories is the manufacture of biological products such as vaccines and sera, mainly for the use of Public Health Departments. While recognising that the preparation of these products by commercial firms in India is an industry which is now well established and has been making rapid progress, the majority of us consider that the large scale production of basic prophylactics such as cholera, plague, TAB vaccines, vaccine lymph and anti-rabic vaccine is of paramount importance to the public health authorities in India in protecting the people against epidemics and that their production should therefore remain a Government responsibility.*

All-India Medical Institute

269. Our recommendations in the section dealing with professional education are intended to promote the production of health personnel under the different categories, in as large numbers and as rapidly as possible. Side by side with these developments, however, we consider it of the first importance that at least a few institutions, which will concentrate on quality, should also be established in suitable centres in different parts of the country. In the first place we recommend the establishment of one such train-

*Drs. Vishwa Nath and Butt are of the opinion that the time has now arrived when the manufacture of such products should be a responsibility of commercial firms under sufficiently strict Government inspection to ensure public safety. Their views are expressed in a note on medical research, which has been appended to Chapter XIX of Volume II of the report.

ing centre for which we would suggest the designation, All-India Medical Institute. The objects of the Institute should be (1) to bring together in one place educational facilities of the very highest order for the training of all the more important types of health personnel and to emphasise the close interrelation which exists between the different branches of professional education in the field of health; (2) to promote research of the highest type in all the branches of study for which the Institute will be responsible; (3) to co-ordinate training and research; (4) to provide postgraduate training of an advanced character in an atmosphere which will foster the true scientific outlook and a spirit of initiative; (5) to inspire all persons who undergo training, undergraduate or postgraduate, with the high ideals of the profession to which they belong and (6) to promote in them a community outlook and a high degree of culture, in order that they may become active apostles of the progressive spirit in whatever field they may be called upon to serve, whether it be teaching, research, general health work or administration. Though the *alumni* of such an institute may not be numerous, we feel confident that the influence which they will exert in their respective spheres will be out of all proportion to their numbers.

We recommend that the Central Government should be responsible for its establishment and maintenance.

The Range of the Institute's Activity

270. We suggest that, in the beginning, the Institute should aim at providing only medical training in all its branches and also the training of nurses. The Institute must therefore have, as an integral part of it, a medical college with its teaching hospitals and laboratories as well as a college to provide the highest type of nursing education. Later on provision should be made for the training of all the higher types of health workers.

The Selection of Students

271. The students to be admitted to the medical and nursing colleges attached to the Institute should be selected very carefully, merit being the sole criterion for admission. As the needs of the country as a whole are to be served, applicants from all parts of India should be eligible for admission.

Organisation and Control

272. The organisation and control of the Institute should cover (1) the administrative field and (2) the technical and scientific field.

The administrative field.—An institution of the type we envisage should have freedom to develop its own activities independently and without the delaying and hampering effect that

strict governmental control may entail. We therefore propose that its administration should be vested, from the time of its inauguration, in a Governing Body of suitable composition.

The technical and scientific field.—Although it may appear somewhat novel in this country, we suggest that the technical work of the Institute should be developed and directed not by an outside body, however eminent its members may be, which will impose its ideas on the Director and Professors of the Institute but the latter themselves acting as a medical faculty. In making this recommendation we are not putting forward a procedure without precedent. We understand that, in the Johns Hopkins Medical School, a similar arrangement has worked successfully for many years and that it has contributed materially to the attainment, by that institution, of the pre-eminent position it holds in the world of medical education. We also understand that this system generally prevails in the United States.

Recruitment of the Staff

273. Our recommendations in connection with the recruitment of the health services, which have been set out earlier, apply generally to the recruitment of the staff of the Institute also. As regards procedure, however, a departure seems desirable from our suggestion that recruitment to the different health services should be made through the various Public Service Commissions. We feel that the adoption of the procedure, which has been practised in the Johns Hopkins University and which we understand is generally followed in other universities in the United States, may with advantage be tried here. In the Johns Hopkins Medical School recommendations for the appointment of professors are made by the medical faculty of that institution, which consists of its own professors. While the authority for making the appointment is vested in the university, it is understood that the recommendation of the medical faculty is invariably accepted. We desire to see this principle adopted for the recruitment of the staff of the Institute, the Governing Body being the appointing authority and the Medical Faculty, the recommending body.

Finance

274. We consider that the Central Government should fulfil adequately the responsibility of financing the Institute on a sufficiently generous scale to promote its development into, and maintenance as, an all-India training centre on the lines indicated by us. An appeal should, however, be made to the public for contributions. The Institute is of such paramount importance for the full development of the proposed national health programme that

its financial stability should be ensured by the Government of India endowing it with an amount sufficient to secure, through the accruing interest, at least half the estimated annual expenditure of the institution in its fully developed form and by a statutory provision for any balance that private benefactions may fail to provide.*

Health Organisation for Delhi Province

275. The Central Government should attempt to demonstrate in Delhi Province the effects of implementing not only our proposals but also those put forward by other committees, which have made recommendations for postwar development in different fields of community life. The purpose in view is to demonstrate to the country as a whole what can be achieved, through co-ordinated effort, to improve the health and general prosperity of the community.

Our Proposals

276. While our proposals for the health organisation in Delhi Province follow the main outlines of the general plan suggested for the country as a whole, there are modifications in certain directions. These are designed to secure a higher level of efficiency in the proposed health service, in view of Delhi being a demonstration centre for the country as a whole. For instance, a rural primary unit in this province will have only a population of 20,000 as against double that number which has been suggested for the rest of the country. The proposed provision for medical relief will be higher in Delhi Province than that suggested by us in other provinces. The dispensary at the headquarters of the primary unit will have five emergency beds as against two elsewhere, while the 30-bed hospital will serve in Delhi a population of 60,000 as against 160,000 in the rest of the country. In view of the limited number of women doctors available in India, our proposals for the appointment of a woman doctor to each primary unit may not be possible of being carried out in the country as a whole in the early stages of the programme. It should, however, be possible for Delhi Province to secure women doctors for the relatively smaller number of such units which will be developed here. In proportion to the population Delhi will have double the number of midwives and trained *dais* in each primary unit as compared with the rest of the country. Thus health work among women and children should be capable of development here on a more effective basis in the other provinces.

*Mr. P. N. Sapru and Dr. Hameed do not agree with the rest of the Committee on a few points. Their note is appended to Chapter XX of volume II of the report.

DRUGS AND MEDICAL REQUISITES

Supplies

277. Second in importance only to the provision of trained health personnel must come the supply of the therapeutic substances and medical appliances without which doctors and public health workers generally may be reduced to a stage of virtual impotency in the practical exercise of their profession. We have had evidence to show how grave has been the lack in this country of these essentials. Even when they are available, the cost in respect of some is so high as to prohibit or at least gravely restrict their use. Quinine may be cited as an example. We are told that, in the year 1935-36, the actual cost of producing quinine in Bengal from home grown bark was about Rs. 6/8/- a pound, while the Government selling price of this article was Rs. 18 and the market rate Rs. 22 a pound. This market rate was largely decided by an international organisation, Kina bureau, which controlled about 95 per cent. of world's supply of quinine. Nor can be indigenous profiteer be absolved from the charge of criminal exploitation. We feel that such a state of affairs should not be permitted to continue and that it calls for immediate attention and remedy.

278. We recommend that a small committee, mainly but not entirely technical in composition, should be appointed to examine the question of the requirements of the country in respect of drugs and other medical requisites. The following are some of the more important matters which it should investigate:—

- (a) What are the drugs and other medical requisites essential for general use in the country?
- (b) What practical steps should be taken to ensure their manufacture in the country in sufficient quantities and their sale at a price which will make them available to all who need them?
- (c) What are the circumstances which would justify the conclusion that the manufacture of any of these in the country is inadvisable?
- (d) What should be the respective fields of Government and of private enterprise in the manufacture of these requirements?
- (e) What aid and assistance should be given to private agencies in such cases and under what condition?
- (f) What machinery should be established to develop research regarding drugs and other medical requisites and their production in India and to ensure the continuity and co-ordination of such research?

- (g) What machinery should be set up to ensure a steady flow of trained technical personnel?

279. We believe that it should be possible adequately to provide for these essential needs through a combination of private enterprise suitably assisted, where necessary, and production by the State where this is found to be in the public interest. The final responsibility should rest with the Government for seeing that the essential needs of the country in respect of all important medical requisites are met and this responsibility should be interpreted as covering the necessity for ensuring that these requirements are met satisfactorily in regard to quantity, quality and price.

Control

280. The Drugs Act of 1940, which was passed by the Central Legislature, now provides for the regulation of the import into and the manufacture, distribution and sale in British India of drugs. We understand that certain statutory rules under the Act will be brought into force at an early date by the Government of India. The provisions of this Act and the rules made under it should be brought into operation throughout the country and rigidly enforced with the least practicable delay.

INDIGENOUS SYSTEMS OF MEDICINE

281. We are unfortunately not in a position to assess the real value of these systems of medical treatment as practised today as we have been unable, with the time and opportunities at our disposal, to conduct such an investigation into this problem as would justify clear-cut recommendations. We do, however, say quite definitely that there are certain aspects of health protection which, in our opinion, can be secured wholly or at any rate largely, only through the scientific system of medicine. Thus public health or preventive medicine, which must play an essential part in the future of medical organisation, is not within the purview of the indigenous systems of medical treatment as they obtain at present. The indigenous systems of medical treatment do not also at present deal with such vital aspects of medicine as obstetrics, gynaecology, advanced surgery and some of the specialities. Further, no system of medical treatment, which is static in conception and practice and does not keep pace with the discoveries and researches of scientific workers the world over, can hope to give the best available ministrations to those who seek its aid.

282. We feel that we need no justification in confining our proposals to the country-wide extension of a system of medicine which, in our view, must be regarded neither as Eastern nor Western but as a corpus of scientific knowledge and practice belonging to the whole world and to which every country has made its contribution.

286. We consider this position unsatisfactory. We are recommending that, for the future, there should be only one basic medical qualification for entry into the profession throughout India and that the portal of entry should be a university degree. The production of the licentiate type of doctor will cease after some time if these recommendations of ours are accepted. In the circumstances we recommend that the Medical Council of India should be empowered to maintain an All-India Register when the training of licentiates ceases throughout the country.*

287. The need for restricting the right to prescribe drugs in the British Pharmacopoea and to practise scientific medicine by unqualified and unregistered personnel was emphasised in our discussions. In this connection we considered the desirability of enacting legislation providing (1) that no medical practitioner should be entitled to affix the designation "doctor" before his name unless he is a registered medical practitioner in modern scientific medicine, (2) that no person should be entitled to prescribe drugs in the British Pharmacopoea, especially injections and poisonous preparations, unless he is a registered practitioner, and (3) that those who practise Unani or Ayurvedic systems of medicine should style themselves as "Hakims" or "Vaid" as the case may be.

288. We consider that the public is entitled to know the exact credentials of persons on whom they call for advice and treatment and to protection against fraudulent imposition. We suggest that legislation should be made so as to provide that no person shall be entitled to use the style or appellation of "doctor" other than those who (a) hold the Doctor's degree of a Faculty of a University recognised by the State or (b) are practitioners qualified to practise modern scientific medicine.

289. Rule 65(9) of the Drugs Rules, 1945, under the Drugs Act, 1940, provides that a number of poisons, which are included in Schedule H of these Rules, shall not be sold in retail except on and in accordance with a prescription of a registered medical practitioner. But Schedule H does not contain all the poisons enumerated in Schedule E of the same rules. We consider that, if Schedule E can also be included within the operation of Rule 65 (9), our colleague's recommendation would be met adequately and that any further restrictive legislation is of doubtful advisability and practicability.

290. The terms "Hakim" and "Vaid" are honourable titles of considerable antiquity and it is by no means clear to us why persons entitled to use these honourable appellations should desire

*Drs. Vishwa Nath and Butt are not in agreement with this recommendation and their note will be found appended to Chapter XXIV of Volume II of the report. They suggest the maintenance of the existing position in respect of all these Councils.

to assume any other. We do not feel competent to make any recommendations regarding the organisation and regulation of indigenous systems of medicine. We therefore confine ourselves to the recommendation that Provincial Governments, if they desire to recognise these systems, might with profit follow the example of the Government of Bombay and enact legislation by which all persons practising any form of the healing art are compelled to secure registration in a schedule or schedules appropriate to the system in vogue and their qualifications in such system.

The Dental Profession

291. The profession of dentistry is, as yet, totally unorganised in India and no legal provision exists for its regulation. We recommend that legislation should be undertaken in order to create Central and Provincial Dental Councils. The latter should be charged with the duty of recognising training institutions and of creating and maintaining Dental Registers as well as with the disciplinary regulation of the profession, subject to appeal. The Central Dental Council should be concerned with the direction and co-ordination of the activities of the Provincial Councils, the definition and maintenance of minimum educational standards, which implies the right of inspection and recognition of training institutions, the maintenance of an All-India Dental Register, the disposal of appeals against disciplinary decisions by the Provincial Councils subject, as may be necessary, to the directions of the Federal Court and the regulation of reciprocity within and without India.

Regulation of the Nursing Profession, including those of Midwives and Health Visitors

292. At present the regulation of the nursing profession, which includes those of midwives and health visitors, is vested in Provincial Nursing Councils which maintain registers of persons who have completed approved courses of training in institutions recognised by them for the purpose and have passed the prescribed examinations. Persons so registered are entitled to practise the profession in their own province. Arrangements for reciprocity with other provinces exist to a degree which varies with the Nursing Council concerned.

293. We recommend the creation of an All-India Nursing Council to co-ordinate the activities of the Provincial Councils, to lay down minimum educational standards and to safeguard their maintenance. Questions of reciprocity within and outside India should be the concern of this Central Nursing Council. We recommend the maintenance of an All-India Register by this Council, with separate schedules for the entry of approved qualifications.

health programme for the country which we contemplate. We therefore consider it essential that the services of all such personnel should be utilised, except in cases of proved unsuitability.*

THE ESTABLISHMENT OF A COMMITTEE OF STANDARDS FOR MEDICAL INSTITUTIONS AND EQUIPMENT

298. In view of the heavy constructional programme which will have to be formulated to supply the new accommodation required under our proposals, to carry out the structural alterations necessary in respect of existing buildings and to provide the vast number of fittings of all kinds required by laboratories, health centres, hospitals etc., it seems desirable that some system of standardization should be evolved which will introduce order into what may otherwise well tend to become chaos. With the achievement of order there will be obtained the further advantage of reduced cost that automatically accompanies effective standardization. We urge the setting up of a Committee of standards for Medical Institutions and Equipment and suggest that it should be closely linked with the appropriate section in the Central Ministry of Health. Its composition should include:—

- (1) architects with experience of designing and construction of medical institutions under tropical conditions;
- (2) engineers with similar experience;
- (3) medical practitioners, not merely as doctors, but as having an interest in, and experience of, design, construction and administration of medical institutions;
- (4) laboratory scientists with an interest in the elaboration of laboratory fittings on a transferable unit system and
- (5) members of the nursing profession with a special knowledge of the problems of internal hospital design.

299. We recommend that the Committee should, among other things, give serious consideration to the feasibility of adapting some of the many existing buildings of a temporary nature, which have been set up for war purposes by the military and civil departments of the Central and Provincial Governments, to purposes in connection with our health development programme.

RE-EMPLOYMENT OF PERSONS WHO HAVE REACHED THE AGE OF SUPERANNUATION

300. Among the major difficulties which have to be overcome in the successful implementation of our recommendations probably

*Drs. Vishwa Nath and Butt, Sir Frederick James and Lieut.-General J. B. Hance desire to lay further emphasis on the remobilisation, for civil purposes, of demobilised medical and ancillary personnel and their separate note will be found at the end of Chapter XXV of Volume II of the report.

the greatest is the general inadequacy of existing health personnel and, in some cases, the entire absence of certain classes of professional and technical workers. The need for trained personnel is so clamant as to make the rigid maintenance of the normal rule that Government servants should be superannuated at the age of 55 inconsistent with the requirements of the situation, at any rate throughout the short-term period and probably in the earlier years of the succeeding period. Subject to physical and mental fitness persons who have reached the age of superannuation should be permitted to continue to work on a year to year basis, on the condition that they are found fit by the medical board on each occasion. In order to ensure that the continuation in service of such persons does not stand in the way of normal promotions in the health services, they should be made to retire before they are re-employed.

These recommendations of ours should apply to all members of the health services.

THE POPULATION PROBLEM

301. The steady growth of population, which has taken place during the past few decades, has had its repercussion on all such matters as the housing, clothing and feeding of the additional numbers brought into existence from year to year, their education and the provision of adequate measures for the protection of their health. No programme of social reconstructions can, therefore, afford to ignore the implications of the population problem.

302. The three main factors which influence the growth of population are (1) migration, (2) mortality and (3) fertility.

Migration

303. Owing to the restrictions which the Governments of other countries have placed on the entry of Indians into their territories, the effect of migration on India's population has been negligible for some time past and is likely to be so, at least for some time longer.

Mortality

304. During the past two decades there has been a steady fall in the mortality rate of the country. A further fall is bound to occur if the large scale programmes for improving the health of the community advocated by the different postwar planning committees are effectively put into operation. There is every reason to believe that there will be a saving of at least three million lives every year in British India, which will bring its rate of mortality down to the level of what has already been accomplished in a number of other countries. In the decennium between 1931 and 1941 the average yearly addition to the population of India as a whole was 5 millions. An annual saving of 3 millions in British

India as the result of improved health conditions will raise India's rate of growth to 8 millions a year, without taking into consideration any fall in mortality that may be brought about in the Indian States through similar health measures. Under such conditions the very large increase of 83 millions, which took place in the 20-year period between 1921 and 1941, is likely to be reached within half that time. A purposeful control of mortality, without a corresponding fall in the fertility rate of the community, can thus have far-reaching consequences.

Fertility

305. All available information seems to suggest that the fall in the fertility rate in India during the past 60 years has been negligible compared with the fall in mortality. In this connection certain estimates of the rates of fertility and mortality for the country are quoted from an interesting study of India's population problem by Kingsley Davis, under the title of "Demographic Fact and Policy in India," published in the Milbank Memorial Quarterly (July 1944).

Year	Estimated	
	Fertility rate	Death rate
1881—1891	49	41
1891—1901	46	44
1901—1911	49	43
1911—1921	48	47
1921—1931	46	36
1931—1941	45	31

306. It seems fairly clear that, at least in the immediate future, there is little reason to believe that there would be a marked fall in the fertility rate of the country.

Our Recommendations

307. In the absence of certain natural checks such as famine and disease whose operation will, speaking generally, become more and more limited as our various programmes of social security and improvement in living conditions develop, the growth of population in India will become an increasingly serious problem. Growth of population may be prevented from becoming a menace to the standard of life of the community (a) by migration, (b) by increasing the production of natural resources and (c) by a reduction in the rate of additions to the population. We have already pointed out that the prospects of emigration helping to lessen the

pressure of population on the means of subsistence in the country appear to be remote.

Increased Production

308. The advance of science, careful planning and concentrated effort on the part of the community to develop the country's resources may make possible the support of a largely increased population on even a better standard of living than that which exists at present. Such measures, however, can constitute only a temporary expedient, because a limit to economic productivity will be reached, sooner or later, and uncontrolled growth of population must, as far as we can see, outstrip the productive capacity of the country.

Reduction in the rate of Additions to Population

309. Our social instincts militate against a reduction in the rate of growth of population being brought about by permitting the death rate in the community to rise. We have therefore to turn to three other means for decreasing the rate of growth, namely, (1) a raising of the age of marriage for girls. (2) an improvement in the standard of life and (3) intentional limitation of families.

310. Raising of the age of marriage for girls.—Carefully collected statistics from several countries support the view that the fertility of women is at its highest during the age period 15 to 19. The raising of the age of marriage for girls by a few years from the present minimum of 14 would probably effect a reduction in the birth rate. There are also strong physiological reasons for raising the minimum age for the marriage of girls to 16, 17 or even 18. We refrain, however, from making a specific recommendation, partly because we are not unanimous on the point and partly because the question is so intimately bound up with social custom and tradition, that the Governments concerned should consider the state of public opinion before taking any decision.

311. Improvement in the standard of living.—An improvement in the standard of living generally tends to promote a lowering of the birth rate by helping to create an incentive in individuals to limit the size of their families in the interests of maintaining for themselves and their children a reasonable level of comfort and of enabling the latter, through proper education and through the opportunities for earning their living which such education offers, to keep up the standard of life to which they had been accustomed. Such rise must however be a slow process and, while this development goes on, it seems likely that the active measures introduced by the proposed health services will result in an appreciable reduction of the death rate and thus produce a temporary acceleration of the rate of growth of population.

312. Intentional limitation of families.—If we believe that limitation of families is advisable, we should first ask ourselves the question whether it is possible that this could be secured through self-control. Our answer must be, we fear, not to any material extent. While a limited number of individuals may be under-sexed or may, by nature, be so constituted that they can sublimate most of their sexual urge into intellectual, artistic or other creative channels, the large majority of mankind, although able to convert a part of their sexual impulse into activities useful to the community, may still have to find satisfaction in the sexual act itself. In the circumstances we seem to be left with birth control through positive means as the only method which is likely to be effective.

The Extent to which the State should help to promote the Birth Control Movement

313. All of us are agreed that, when childbearing is likely to result in injury to mother or infant, there is every justification for the practice of contraception. In such cases it should be the responsibility of Governments to provide instruction regarding contraception in maternity and child-welfare centres, dispensaries, hospitals and any other public institutions which administer medical aid to women. We also consider that the supply of contraceptive requisite should be made, free of cost, by the State to necessitous women when the practice is advocated for reasons of health. There is also unanimity among us in respect of State action in two other directions, namely, (1) control over the manufacture and sale of contraceptives as in the case of food and drugs and (2) assistance from public funds towards research for the production of a safe and effective contraceptive.

314. Some of us are of the opinion that, on economic grounds also, contraception is justified in the interests of the individual and of the community and that the State should provide facilities for imparting knowledge regarding birth control when desired for such reasons. The others, while they fully appreciate the importance of relating population to the economic resources of the country, feel that the active promotion by the State of contraceptive practices for economic reasons will be justified, in view of objections to it on religious grounds in certain quarters, only if there is substantial support from public opinion.

The Extent to which the proposed Measures are likely to Restrict the Growth of Population

315. For various reasons, which include the inadequacy of medical women and of health visitors to impart birth control knowledge to the women of the country, the enormous cost of making a safe and effective contraceptive available to the people,

the inability of the majority of women to learn and practice contraception satisfactorily and the disfavour with which certain communities look on birth control for religious reasons, we believe that a rapid extension of the practice of contraception among the people is unlikely in the immediate future. It also appears to us that there is little immediate prospect of raising the age of marriage for girls by legal enforcement. On the other hand, as has already been pointed out, the immediate prospect is that, with the introduction of the proposed health services and of the measures designed to advance the welfare of the community, the rate of growth of population may show an acceleration as compared with the past. While recognising fully the implications of this increase in population, we feel that the only practical steps that can be taken are (1) a relentless pursuit of the measures that are now being proposed for the reconstruction of national life in order to raise the standard of living and (2) the spreading of the knowledge of birth control as far as the limitations imposed by the peculiar circumstances of the country will permit.

Genetics and Population Policy

316. The application of knowledge regarding heredity for the development of a healthy and vigorous stock of different species of animals and plants has been made by man with remarkable success in respect of many forms of life. As regards man, however, the extent of our knowledge regarding the hereditary transmission of disease and defect is at present very limited and, with the existing knowledge, it would be difficult to formulate and execute an effective population policy directed to promote the creation of a healthy and well-endowed community. We therefore consider it desirable that, as a part of the study of the population problem in India, the part which heredity and environment play in the transmission of valuable human traits and of defects should be investigated.

Study of the Population Problem

317. It is highly desirable that the population problem should be the subject of continuous study. Apart from the probable trend of population growth, such matters as differential fertility and mortality rates and surveys of morbidity among the various sections of the community are of interest and importance from the point of view of sound administration. The problems of heredity and environment in relation to population policy should also receive consideration. We desire to see such studies organised and conducted on as broad a basis of collaboration as possible and suggest that the Registrar General and Provincial Registrars, with their respective staffs of trained statistics; the Health Departments, Central and Provincial, and Departments of Economics, Sociology,

Statistics and Genetics in the Universities, wherever they exist, should participate in such studies.

ALCOHOL IN RELATION TO HEALTH

318. Drinking has, as pointed out by Professor Sigerist in his book "Civilisation and Disease", two main causes. "One is social and economic. Misery, poor living conditions, lack of education and of recreational facilities drive a man into drinking. In Russia in 1913, the annual consumption of vodka amounted to 8.1 litres or more than 2 gallons per person, and the average worker spent over a quarter of his wages on liquor. When conditions of the working population changed after the Revolution the *per capita* consumption of liquor dropped steadily. It was 4.5 litres in 1931, 3.7 in 1935.....Another cause of harmful drinking is to be sought in folk customs and group habits. Since alcohol removes inhibitions and makes people talk more freely, it became the custom to drink alcoholic liquors whenever people gathered for social intercourse. This *alcoholisme mondian*, as the French call it, affects the most highly educated classes. It is not so spectacular, but has nevertheless very deleterious results." A campaign for reducing alcoholism in the community must therefore take into account both these factors. A rise in the standard of living accompanied by the provision of educational and recreational facilities on as wide a scale as possible seems to be essential to ensure the success of the campaign. The harmful effects of convivial drinking can be brought home to the people and their co-operation secured for its effective control only through education.

Education regarding the Fundamental Facts in relation to Alcohol

319. In the United States, all but two States (Arizona and Wyoming) have laws requiring that all schools supported partly or wholly from public funds should include, in their curricula for children, courses of instruction dealing with the effects of alcohol and other narcotics on the human system. We desire to see such provision made in this country also. Proper text-books on the subject should be prepared by some central agency and they should be translated into all the languages of individual provinces by the respective Provincial Governments. In doing so it should be possible to include material, diagrammatic and narrative, which will give a local colour to the different subjects that are discussed.

Certain Other Suggestions for Combating Alcoholism and for Restricting Alcohol Consumption to the Minimum

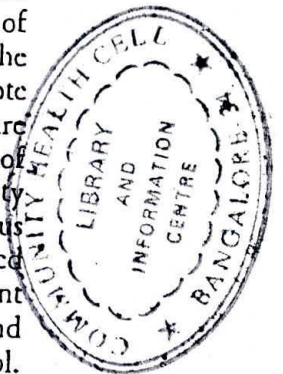
320. We recommend the strict control of existing liquor shops and the severe restriction or even prohibition of opening new shops, particularly in the areas occupied by the poorer sections of the community, including industrial workers. There should be a

reduction in the hour of sale of alcohol. The alcoholic content of the beverage sold in such places for public consumption should be within certain limits to be prescribed by the Provincial Government. The aim should be to make the places, where alcoholic beverages are permitted to be sold, decent establishments where a high standard of cleanliness is maintained and suitable alternative refreshments are provided, so that a man can take his family and order food along with drinks. The experience in the West is that, under such conditions, the excessive consumption of alcohol is generally checked. There should also be provision for the supply of non-alcoholic beverages. Milk bars, tea and coffee shops, if run on cheap lines, can help to divert the craving for intoxicating drinks into less harmful channels. The desire for alcohol at the close of the day is perhaps partly stimulated by the lack of opportunities for other forms of useful activity, including recreation and social intercourse.

321. Provincial Government obtain today a substantial part of their revenues from alcohol. "Little economic merit can be claimed for a system of taxation which raises any considerable part of the public revenue from the sale of alcohol, unless, as a part of the plan of government, this tax money is used to reduce the extent of facilities for the sale of alcoholic beverages; to promote observance of restrictive laws; to meet the cost of prevention, care and treatment of alcoholism among the considerable number of persons whose health will be injured and whose earning capacity will be reduced by the use of alcohol". It seems important to us that a substantial part of the money so derived should be devoted by Governments in this country to measures designed to prevent the spread of alcoholism and to rehabilitate those whose health and working capacity have been injured by the excessive use of alcohol.

Treatment and Rehabilitation of Alcoholics

322. The treatment of acute and chronic alcoholism is essentially a medical problem and adequate provision should be made for it as a part of the general health programme. The rehabilitation of the chronic alcoholic is, however, a much wider problem. Here, apart from any medical measures that may be adopted, there is the question of re-educating him to a saner outlook on life there is the question of re-educating him to a saner outlook on life and his responsibility towards those who are dependent on him. The rescuing of the growing children in the home of such an individual from the degrading effects of brutish behaviour resulting from drunkenness is an equally important matter. The establishment of houses of detention for those alcoholics who require segregation and treatment, medical and social, should receive serious consideration. Legal sanction for such detention will, no doubt, be required and the question of acquiring



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the necessary powers should also be considered. In this sphere of activity voluntary effort can render valuable help. The rescuing of the individual back to normality can be helped enormously by properly directed efforts in which social workers and religious leaders should take an active part.

323. The consumption of alcohol, during working hours, by persons engaged in certain occupations is dangerous to themselves and to others. For instance, pilots in charge of aeroplanes and motor-drivers should be forbidden alcohol during working hours. It should be an offence punishable under the law for such persons to be found in a drunken state when engaged in their respective occupations. We have given these only as typical instances and there are many others in which the use of alcohol should be equally forbidden in the interests of the community. There is abundant evidence to show that the efficiency and output of the industrial worker are lowered by a alcohol and that the accident rate is raised. The enforcement of total abstinence during working hours appears therefore to be of advantage from the point of industry and of workers alike.

THE INSTITUTION OF A MEDICAL LIBRARY SERVICE

324. One of the prime needs of an intellectual community is an effective library service and this is more especially the case where a highly technical subject such as medicine is concerned. India is at a great distance from other centres of scientific thought and she must inevitably draw her knowledge of advances and discoveries from books and journals published in other countries. She must be largely self-contained and the need for a full and well-selected Central Library is even greater than that of Europe and America, where facilities for the dissemination of knowledge are more highly developed.

325. India has not the funds to enable her at present to institute a library comparable with the more important libraries of the world, such as Washington with its 420,000 volumes, Leningrad with 600,000, Paris with 500,000 or even with that of the Royal Society of Medicine in London with 160,000 volumes. It seems to us, however, to be not unreasonable that we should recommend the establishment in India of a Central Library, providing, in the first instance, for the housing of 60,000 to 100,000 volumes.

326. In order to put the proposed library service on a sure foundation, an exploratory survey of the facilities existing in the United Kingdom, the United States and elsewhere should be under-

— taken by one or two officers (of whom at least one should be an Indian) deputed for the purpose:

327. There should be, in London, a correspondent to the library who will watch its interests in the West and act as the channel both of information and of supply in matters concerned with the library service.

328. The Central Library we envisage is one chiefly devoted to research and should be established in association with the All-India Medical Institute. When similar medical institutes are established elsewhere they will have to be provided with their own libraries. A case can be made out for an entirely separate library in the directorate of the future civil health service. We prefer, however, to leave that question, together with the proposals for the establishment of regional libraries, to the consideration of the Governments concerned after the survey, which we have suggested has been completed, when fuller and more exact information will be available.

LEGISLATION

329. Our proposals for legislation fall mainly under four heads :—

- (1) those which are intended to assist in the formulation and execution of a national health policy based on the largest possible agreement between the Central and Provincial Governments and to promote the co-ordination of central and provincial health activities;
- (2) those which are designed to improve health administration in the provinces, particularly the standard of such administration in local areas;
- (3) those which are required for conferring special powers on health authorities to enable them to carry out their duties more effectively than they are able to do at present and
- (4) those which are intended to give statutory sanction to certain proposals of ours, e.g. the establishment of the All-India Medical Institute, the Central Committee for Post-graduate Medical Education and Central and Provincial Water and Drainage Boards.

Consolidated Public Health Acts, Central and Provincial

330. In addition we recommend the enactment of consolidated public health Acts by the Central and Provincial Legislatures. Such Acts can serve at least three purposes, namely, (1) to bring together existing legal provisions relating to health, which are scattered over various enactments, (2) to modify those sections of the law

which require change in the interests of promoting efficient administration and (3) to incorporate the new provisions which will be necessary for the development of the health programme we have recommended. At the Centre provisions relating to health are found in about 40 different Acts while, in the provinces also, a varying number of legal enactments contain such provisions.

331. Such legislation at the Centre and in the Provinces may take some time to materialise. In the meantime it is recommended that the Central Government should undertake to bring together, in a single publication, all the existing laws relating to health, both Central and Provincial.

THE FINANCIAL IMPLICATIONS OF THE PROGRAMME

332. In drawing up our proposals for the short-term programme we have given careful consideration to the instructions of the Government of India on the financial aspect of planning, which were embodied in the terms of reference defining the scope and nature of the enquiry entrusted to us. The Government of India said that it was desirable "to plan boldly, avoiding on the one hand extravagant programmes which are obviously incapable of fulfilment and on the other halting and inadequate schemes which could have no effect on general health standards and which would bring little return for the expenditure involved". We decided that our guiding principle should be that the short-term plan must produce an appreciable improvement in the health of the people within the period of completion of the plan. This is a matter of even greater importance than questions of cost. We were strengthened in this view by two considerations. One is that planning would defeat its purpose if no satisfactory results could be demonstrated. The consequences of such failure might even be a set-back, for many years to come, in the development of health administration in the country.

333. The other consideration is that, if the rates of expenditure incurred by Provincial Governments on their medical and public health departments were to be taken even as an approximate guide to determine the financial limits of our proposals, any attempt to build a satisfactory scheme of health services for the people would be foredoomed. In 1939-40 the *per capita* expenditure on these two departments together was Re. 0-1-7 in Bihar, Re. 0-1-9 in the United Provinces, Re. 0-2-7 in Bengal. The highest figure for such expenditure was Re. 0-5-9 in the province of Bombay. In order to ascertain what an improved health service is likely to cost it may not be out of place to examine the corresponding expenditure for certain other countries, where the provision for affording health protection to the people exists on a much larger scale than

in India. In Great Britain, the *per capita* expenditure on medical and public health activities was, in 1934-35, about Rs. 54-8-11 and in the United States the corresponding figure for 1938 was Rs. 51-6-0. The expenditure incurred by a country on its health services must necessarily depend on its national income and India compares, in this respect, very unfavourably with the two countries mentioned above. Certain estimates of national income for these three countries from sources to which we may reasonably attach value are quoted below :—

Country	Income <i>per capita</i>			Source of information
	Rs.	A.	P.	
British India	62	13	3	The National income of British India 1931-32, by Dr. V. K. R. V. Rao.
Great Britain	1,049	6	5	Journal of the Royal Statistical Society, Vol. 103, 1940, page 517.
United States	1,371	7	3	Monthly Labour Review, Vol. 53, 1941, page 114.

334. The *per capita* income of the United States is about 22 times that of India and that of Great Britain about 17 times. Even after making due allowance for the much higher national incomes in those countries, India should spend annually about Rs. 3-3-0 per head of the population if her expenditure on health services were to bear the same relation to national income as the amount spent in Great Britain in 1934-35 on health measures bore to her own national income. On the basis of a similar comparison with the United States India's *per capita* expenditure on health should be Rs. 2-5-0. From our survey of modern trends in the organisation of health services in Chapter II of Volume II of our report it will be seen that the authorities in those countries are dissatisfied with the provision for the health protection of their people and that expenditure on a generous scale to augment the existing services is under active consideration. In these circumstances, if India desired to develop a modern health organisation, a scale of expenditure much in advance of what the provinces have been incurring, was inevitable. We therefore decided to plan our short-term programme underterred by the cramping limitations of existing provincial expenditure and with our main consideration directed to the development of a plan which would ensure, through its execution, a demonstrable improvement of the public health.

The Estimates of Cost

335. We give below, in the tabular form, the main items of our estimates of cost separately for the first five years and the second five years of the short-term programme.

Approximate estimates of costs in respect of the proposals of the Health Survey and Development Committee for British India.

NON-RECURRING EXPENDITURE

	First five years	Second five years	First ten years
	Rs.	Rs.	Rs.
1. Personal health services including the directional organisations associated with the Ministries of Health at the Centre and in the Provinces.	80,88,00,000	118,64,00,000	199,52,00,000
2. Professional education	22,45,00,000	19,86,00,000	42,31,00,000
3. Expenditure on other items	50,42,00,000	50,20,00,000	100,62,00,000
4. Centre	153,75,00,000	188,70,00,000	342,45,00,000
5. British India as a whole	9,22,00,000	11,32,00,000	20,54,00,000
	162,97,00,000	202,00,00,000	362,99,00,000

RECURRING EXPENDITURE

1. Personal health services including the directional organisations associated with the Ministries of Health at the Centre and in the provinces.	116,10,00,000	250,02,00,000	366,12,00,000
2. Professional education	32,00,00,000	35,24,00,000	67,24,00,000
3. Expenditure on other items	4,54,00,000	12,32,00,000	16,86,00,000
4. Leave reserve	7,83,00,000	15,08,00,000	22,91,00,000
5. Centre	160,47,00,000	312,66,00,000	473,13,00,000
6. British India as a whole	9,63,00,000	18,76,00,000	28,39,00,000
Payment towards amortisation of non-recurring expenditure.	170,10,00,000	331,42,00,000	501,52,00,000
	25,076,00,000	74,54,00,000	100,30,00,000
Total recurring expenditure	195,86,00,000	405,96,00,000	601,82,00,000
Average annual expenditure	39,17,00,000	81,19,00,000	60,18,00,000
Average estimated population of British India.	315 millions	337.5 millions	326.25 million
Annual per capita expenditure	Rs. A. P. 1 4 0	Rs. A. P. 2 7 0	Rs. A. P. 1 14 0

336. After making allowance for the low national income of our country as compared with those of Great Britain and the United States, the rate of expenditure on medical and public services in India should be about Rs. 3-3-0 per head of the population in order to reach the level of similar expenditure in Great Britain in 1934-35, and about Rs. 2-5-0 to reach that of the United States in 1938. Our proposals involve, during the first ten years of their execution, an anticipated expenditure of Rs. 1-14-0 per head of the population. We therefore claim that the programme of health

development we have put forward cannot be considered extravagant from the financial point of view. When it is remembered that, in Great Britain and the United States, a further rise in public expenditure on health services has been considered essential in the interests of the people, we hold that there is still greater justification for considering that the demands which our scheme will make on the public purse are in no way unreasonable.

The Financing of the Health Programme

337. We realise, at the same time, that even the proposed *per capita* annual expenditure of about Rs. 1-4-0 during the first five years of the programme will require that Provincial Governments should make provision for spending on health measures, amounts many times in excess of what they are budgeting now. The latest available figures for the combined expenditure on provincial medical and public health departments relate to 1944-45 and they are given below.

Combined expenditure on medical relief and public health activities in the provinces during 1944-45

Province	expenditure <i>per capita</i> in annas	Expenditure on medical relief and public health expressed as a percentage of total provincial expenditure
Madras	6.2	4.7
Bombay	10.9	4.5
Bengal	7.1	5.7
U.P.	3.9	4.9
Punjab	6.1	5.1
Bihar	3.2	7.3
C.P. and Berar . .	2.8	3.1
Assam	5.4	6.2
N.W.F.P.	7.7	5.0
Orissa	3.4	5.9
Sind	8.2	2.5

338. While a small number of items of existing expenditure in the provinces on health administration will fall within the cost of the scheme, the vast majority of them will not and, broadly speaking, the expenditure involved in the execution of our proposals will be in addition what the Governments, Central and Provincial, are now incurring on their medical and public health departments, which as shown above is generally on a meagre scale.

339. A reference to the last column of the above table will show that the expenditure incurred by Provincial Governments on health measures, curative and preventive, constitute but a very small fraction of their total annual expenditure, the percentage ranging from 2.5 to 7.3. On the other hand, the corresponding percentage in Great Britain during 1934-35 was 20.4 and in the United States 13.8 during 1938. It is obvious that Governments in India have, in the past, devoted an unduly small proportion of their incomes to health administration and there is therefore every justification for demanding that the ratio of expenditure under this head must be raised considerably. Governments should be prepared to increase the money spent on health to at least 15 per cent. of the total expenditure. If this is done a considerable advance will have been made in providing the required funds for the proposed health programme. At least in one province (Madras) the local legislature has laid down (Section 127 of the Public Health Act) that every municipality "shall earmark not less than 30 per cent. of its income from all sources other than Government grants, for expenditure on the advancement of public health in its local area, including expenditure on medical relief and every district board or *panchayat* shall similarly earmark not less than 12½ per cent. of its income from such sources". We recommend that it should be a statutory obligation on Governments to spend a minimum of 15 per cent. of their revenues on health activities.

340. We consider it highly desirable that a searching enquiry should be instituted into building costs and the data on which Public Works Departments base their estimates. Instances have been brought to our notice in which private agencies have been able to carry out new building work at less than 50 per cent. of the estimates prepared by the Public Works Departments. We do not venture to base any criticism on such information, but there is undoubtedly a widespread and persistent belief that the Public Works Departments are unduly expensive agencies for the construction of Public buildings. This calls for careful investigation, as considerations having far-reaching consequences for development in many spheres are involved. In this connection we wish to draw attention to the report of a Mission which was sent to the United States of America by the Ministry of Works in the United Kingdom in 1944. The object of the Mission, which was an expert body, was to study American practice with a view to securing in Great Britain in the postwar period (a) increased speed and output, (b) reduced building costs, (c) improved standard of equipment and finish and (d) improved conditions for operatives.

341. An enquiry into building methods and costs, with special reference to the Central and Provincial Public Works Departments in India would now be helpful, particularly if, with the enquiry,

one or two of the representatives of His Majesty's Government's Mission to the United States were associated as well as some non-technical persons.

342. We desire to stress the organic unity of the component parts of the programme we have put forward. Large scale provision for the training of health personnel forms as essential part of the scheme, because the organisation of a trained army of fighters is the first requisite for the successful prosecution of the campaign against disease. Side by side with such training of personnel, we have provided for the establishment of a health organisation which will bring remedial and preventive services within the reach of the people, particularly of that vast section of the community which lies scattered over the rural areas and which has, in the past, been largely neglected from the point of view of health protection on modern lines. We have drawn attention to these aspects of the health programme because we feel that it is highly desirable that the plan should be accepted and executed in its entirety. We would strongly deprecate any attempt, on the plea of lack of funds, to isolate specific parts of the scheme and to give effect to them without taking into consideration the inter-relationships of the component parts of the programme. Our conception of the process of development of the national health services is that it will be a co-operative effort in which the Centre, acting with imagination and sympathy, will assist and guide a co-ordinated advance in the Provinces. We therefore look forward to a pooling of resources and of personnel, as far as circumstances permit, in the joint task that lies before the Governments.



**COMPENDIUM
OF
RECOMMENDATIONS
OF
VARIOUS COMMITTEES
ON
HEALTH DEVELOPMENT
1943-1975**

Issued by

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**II—HEALTH SURVEY AND
PLANNING COMMITTEE-1961
(MUDALIAR COMMITTEE)**

HEALTH SURVEY AND PLANNING COMMITTEE-1961

SUMMARY OF RECOMMENDATIONS

CONSTITUTIONAL PROVISIONS

Although under the provisions of the Constitution of India 'Health' is primarily a State subject, and although more effective central action and a larger measure of Centre-State and inter-State co-ordination is necessary, any amendment of the constitutional provisions, to secure this, does not appear to be called for.

On the other hand, in keeping with the democratic traditions being built up in this country, the objective can be better achieved by the growth of healthy conventions, greater goodwill and better education; by a system of grants-in-aid by the Central Government in support of public health programmes of a national character like those of water supply and sanitation, eradication/control of communicable diseases, family planning and schemes of training of health personnel, by the setting up of an All-India Health Service, by the creation of regional organisations of the Central Health Directorate, by the Central Council of Health being made a more effective organ for policy making and implementation in the matter of national health programmes, by the promotion of zonal Councils, on the lines of the Southern Regional Health Ministers' Council, and by the utilization of the University Grants Commission, or a comparable agency that may be set up for the purpose of advancement of medical education and research.

INTERNATIONAL COLLABORATION

The assistance and support received from international bilateral and other agencies has been most valuable and it is to be hoped that it will continue to be forthcoming to supplement the national effort towards the attainment of a higher standard of health.

GENERAL

1. Having given due credit for the implementation by States of many health measures, it must be confessed that the general picture presented by health statistics of different States does not enable us to take too optimistic a view of the present state of health and of the future health protection of the citizens.

2. Unless the conscience of the citizens as a whole is stimulated to demand and accept better standards of health, unless the principles of sound hygiene are inculcated into the masses through health education and other efforts, and unless Governments feel strengthened in taking positive measures to promote health, it will be difficult for health authorities alone to ensure that the measures contemplated are actually implemented. There are at present wide variations as between States, not only in providing necessary facilities for health care but in the measure of control exercised by authorities in preventing the spread of epidemic diseases. This aspect should be attended to carefully.
3. While appreciating the efforts made by Governments to give relief and provide satisfactory methods of rehabilitation to displaced persons, the absence of a measure of willingness on the part of the displaced persons themselves has created difficulties not only for the displaced persons but also the populations of the States concerned and those of adjacent areas.
4. The increase in the number of hospitals, dispensaries, and beds has not created the impression that might have otherwise been made because of large increase in the population.
5. The arrangements for medical care for the people have to be examined carefully. Overcrowding in hospitals, inadequate staff, non-availability of essential drugs and medicines, mixing of serious with minor cases, lack of co-ordination of hospital services and the close proximity of the out-patient department with the hospital proper, are some of the organisational defects which have to be remedied at an early date.
6. There is a maladjustment in the distribution of trained personnel who congregate in urban areas owing to lack of amenities and gainful employment in rural areas. Moreover highly trained doctors of the medical profession are being utilised to carry out routine duties which can as well be done by lesser qualified people. The need is to conserve such highly trained personnel to jobs that they ought to be doing and to make greater use of auxiliary health personnel.
7. The attempt to start mass campaigns against certain diseases like tuberculosis, smallpox, cholera, leprosy and filariasis is commendable, but the method of dealing with these diseases individually will not be conducive to the organisation of unified efforts needed for the promotion of total health care. The health personnel engaged in such mass campaigns must be trained to tackle all health problems in any area. While the overall supervision for particular diseases may require special attention through specialists, in rural areas it is neither possible nor desirable to have separate agencies to deal with separate diseases.

8. The intensive steps taken at the time of the out-break of epidemics or at the time of sudden catastrophes have led to waste of effort and finance. Instead of sporadic efforts at the time of epidemics, large amounts can be conserved and more lasting results achieved if permanent measures for eradication of diseases are undertaken.

9. While it is noted with satisfaction that the position regarding plague is now more satisfactory than before and that there has been no epidemic of plague for several years, there are certain factors which do not tend to give us the confidence that recrudescence of plague may not occur.

10. In attempting to provide school hygiene it should be ensured that apart from providing minimum standards of sanitation in schools and colleges, conditions are made available to inculcate in children proper health habits from the earliest stage.

MEDICAL CARE

1. It does not appear feasible for the State to provide free medical service on the scale visualised by the Bhole Committee in the near future. It should be considered fairly satisfactory if the ratio of one bed per 1,000 population, is achieved during the fourth or fifth Plan periods.

2. The question of financing of medical care, needs a careful study. The introduction of a system of graded charges for all hospital services, except in the case of the genuinely indigent patients, is called for. The possibility of the levy of a health cess is also worth exploring.

3. Steps need also to be taken for the extension of medical care through the promotion of health insurance schemes. The initial steps taken in this direction in the form of the Employees State Insurance and Contributory Health Service Schemes, should be followed up by extending their scope by giving coverage to other sectors of the population in the case of the former and by bringing all Government servants within the purview of the latter, as early as possible.

4. The Governments should also encourage the development of medical care facilities on co-operative lines, on an experimental measure, through suitable subsidies.

5. The district hospital should occupy the key position in regard to medical care and should be expanded and strengthened with specialist facilities. Besides, there should be mobile teams of specialists to cover all areas of the district and to provide necessary supervisory and consultant facilities at the periphery. On the other hand, the taluk hospitals should be developed to take over the

routine medical, surgical, obstetrical and gynaecological needs of the area.

6. The primary health centre programme as it has developed bears no resemblance to that visualised by the Bhore Committee. It is felt that while the idea of the primary health centre is an excellent one, it will not serve any useful purpose if centres are established without adequate facilities, resources and personnel. The programme needs to be radically revised and it is suggested that the further opening of primary health centres on the existing pattern should be discontinued and any primary health centres that are opened hereafter should be on the pattern suggested to serve a population of upto 40,000 and should have full complement of staff recommended by that Committee. Further the primary health centres already in existence should be upgraded by stages to reach the full-fledged pattern of the Bhore Committee.

7. It will be preferable to provide medical coverage to the rest of the rural population through mobile health units in mobile vans visiting them from district and taluk headquarters than through poorly equipped and staffed primary health centres. Those requiring hospitalisation or intensive medical care can be brought in ambulances to the taluk or district hospitals, for necessary treatment. When facilities in regard to personnel, finance and other requirements are sufficiently enlarged, the Bhore Committee formula of the Primary Health Centres can be adopted.

8. The primary Health Centre should provide residential accommodation to all the personnel of the Centre and should have a bed strength of 10 including two beds for emergency cases.

9. There should be suitable conveyance including an ambulance and a jeep at every Centre. Wherever possible the Centre should be at a place where other activities such as education, agriculture, animal husbandry, etc. are concentrated.

10. It is suggested that before this new programme of Primary Health Centres is implemented on a large scale, each State should establish some model centres so that necessary adjustments can be carried out in the light of experience at a later stage. The model centres will be supported by hospital services at taluk and district level, by telephonic, ambulance and mobile service facilities. Facilities of the police wireless communication now available in the greater part of the country should be fully utilized.

11. Apart from improving the conditions of service of the medical and auxiliary personnel serving in primary health centres, it is imperative that training should be given to prepare the large bulk of students, going through the medical colleges, for public health duties in rural areas and for improving the equipment and

staffing of the primary health centres so as to allow a better standard of work to be undertaken.

12. The Primary Health Centre medical officers should not be allowed private practice, but should be given non-practising plus public health allowances together with residential accommodation. There should be one unified cadre of Assistant Surgeons in the State to man rural health centres as also hospitals at higher levels. All medical officers in that cadre should be given rural assignments by rotation and posting to a primary health centre should normally be after one or two years of service in a hospital under the supervision of a senior medical officer. Service in rural areas should be an essential condition for confirmation in Government service and for crossing the efficiency bar. Preference for post-graduate training should be given to those who have served in rural areas.

13. Taluk hospitals should have a minimum bed strength of 50 and should have three Medical Officers dealing with medicine, surgery, obstetrics and gynaecology. Such a hospital should serve as a referral centre for routine type of cases from two or three Primary Health Centres in that area. Of the three medical officers one should preferably be a woman medical officer for maternity and child health and family planning work. Good clinical side-room facilities should be available. One of the three medical officers should have had training in laboratory work.

14. Each District Headquarters Hospital should be expanded to 300 to 500 beds, of which 75 may be set apart for maternity and 50 for paediatrics. Specialist services in medicine, surgery, obstetrics and gynaecology, eye, ear, nose and throat, paediatrics, tuberculosis, dentistry and venereal diseases should be provided.

15. The specialist in medicine, surgery and obstetrics and gynaecology should have the status of a Civil Surgeon.

16. There should be an isolation unit of 50 beds attached to the District Hospital. The Tuberculosis Clinic and Public Health laboratories at the district headquarters should work in close association with the district hospital. There should also be a chronic and convalescent hospital, in order to relieve the congestion in the hospital and the consequences strain on the staff.

17. A number of district hospitals should be linked with the teaching hospital on a regional basis in order to get expert advice and assistance in the matter of investigation, diagnosis and treatment.

18. Every district and teaching institution should have a blood bank service. The headquarters of each State should develop a special department for blood transfusion service.

19. In planning hospital facilities the basis of one bed for every 1,000 population should be taken for each district. Hospitals at the taluk level will provide 600 to 800 beds and the primary health centres will provide 10 beds each. In addition, the beds available in private or voluntary hospitals should also be taken into consideration. The important thing is to ensure that from the smallest to the biggest hospital they function as an integral whole.

20. The planning and organisation of the Out-patient Department deserves special care. It should be outside the compound of the in-patient department with a separate entrance. The Casualty Department for emergency cases, and the Orthopaedic Department for accident cases should be attached to the Out-patient Department. Certain other departments, such as Eye and E.N.T. could also safely be situated in the out-patient department building. There should be full facilities in the out-patient department for X-Ray and laboratory services, immunization and anti-rabic treatment. Special clinics like diabetic clinic, border-line mental clinic, chest clinic, could also be located in the out-patient department.

21. There is a great need for special hospitals for children.

21(a). Apart from the provision made in district and taluk hospitals and primary health centres for maternity beds, wherever possible independent maternity hospitals should be brought into existence so as to increase within the shortest possible time hospital facilities for maternity cases. Maternity wards or maternity hospitals should be available in all large towns and cities and should be so spread over that facilities are afforded for women in different localities to get admission easily. It is desirable to encourage the habit of pregnant women attending the ante-natal clinic. As far as possible only booked cases should be ultimately admitted into maternity hospitals. Domiciliary visits should be paid by trained health visitors or midwives. Maternity hospitals should also have facilities for post-natal care.

The larger maternity hospitals should serve as training centres for nurses, midwives, nurse-midwives, medical students and other para-medical personnel who serve in the field of maternal and child care. A planned method of development of maternity homes and maternity hospitals which attached ante-natal clinics and facilities for the system of promoting booked cases, is recommended.

22. Each taluk hospital should have 10 to 15 beds for isolation of T.B. cases. Similarly, at the district level where there is no separate T.B. hospital, 30 to 40 beds should be reserved for T.B. cases.

23. Each district hospital should have a Psychiatric Clinic and five to ten beds may be earmarked for psychiatric cases.

24. Mental hospitals should be developed on a regional basis, the optimum bed strength being about 750.

25. Each teaching hospital should have a separate cancer clinic and each State should have a full-fledged hospital equipped with modern facilities for the surgery and radio-therapy of cancer.

26. It is also necessary to have leprosy hospitals for treatment of cases requiring isolation, surgery and rehabilitation.

27. In regard to blindness those concerned with preventive and social medicine should be properly instructed about the aetiology and incidence of eye diseases and the measures necessary for preventing them. Special surveys and provision of adequate number of beds are necessary. At the under-graduate level the students should be adequately trained in Ophthalmology. This will encourage them to take up Ophthalmology as a career.

28. Mass campaign against diseases like trachoma, and other diseases causing blindness like smallpox, etc., should be conducted.

29. There should be one Ophthalmic Hospital for each State with 300 to 350 beds, besides the provision made in the district hospitals.

30. Centres for the rehabilitation of the adult blind should be established.

31. Eighty to ninety per cent of deafness is preventible. This requires education of mothers and children on the simple causes of deafness.

32. Incidence of deafness is likely to increase with the rapid industrialisation of the country and with the frequent exposure of the human ear to loud noises. Steps should be taken to remedy the situation.

33. Training of ear surgeons is necessary.

34. Mechanical hearing aids should be manufactured in India.

35. The deaf schools in the country should be supervised and uniform standards of teaching prescribed by a National Committee.

36. Every State should have an orthopaedic hospital with wings for accident cases. Hospitals for handicapped children with physiotherapy, occupational therapy and other facilities should be organised in each State.

37. The existing institution for training workers in Physiotherapy at Bombay should be fully developed so as to enable it to take on limb fitting activities which are at present being done entirely by the Army Limb-Fitting Centre at Poona.

38. It is felt that in the present state of development of Dental Health Service, it may not be necessary to have full time Deputy or Assistant Directors in the State Health Directorates for Dentistry. It is suggested that Principals of Dental Colleges in the States, where such exist, or the senior-most Dental Surgeon in the State should act as Consultant to Health Directorates to draw programmes for dental services.

39. At the district level a full-equipped and staffed dental clinic should form part of the headquarters hospital. Besides the Dental Surgeon there should be a dental hygienist and a dental mechanic.

40. In each district there should in addition be a dental mobile van, which should visit the taluks and other centres on a carefully drawn schedule. Cases referred from primary health centres for dental examination of school children can be examined in this manner.

41. It is suggested that some orientation in dental care may be given to the auxiliary health worker in each primary health centre, so that he may assist the dental hygienist.

42. The Armed Forces Medical Services can co-operate with their civilian counterparts in order to improve the health of the country and to train medical auxiliary personnel of which there is an extreme shortage in the civil side. A short period of service in the Armed Forces may usefully be rendered by every civilian medical officer. Interchange of specialists for periods, between the Armed Forces and Civilian institutes is also highly desirable.

Medical Care in Railways :

43. In an organised service like the railways it should be feasible to subject all employees to periodical physical examination.

44. It is necessary to provide checks against patients suffering from infectious diseases freely using the railway trains and platforms.

45. Stringent control is required in the matter of cleaning of railway carriages, the inspection of food and the manner of its vending on platforms and refreshment rooms.

46. The public health staff of railways required to be trained at all levels. There appears to be no reason why the Railway Health Service should continue to remain in a water-tight compartment. A common cadre with the Central Health Service is suggested. While retaining the administrative structure of the Railway Health service in general, it is time that railways drew upon the pool of the general Health Services for their medical personnel.

47. It should be possible to make suitable arrangements for advice and assistance from specialists in Government hospitals in bigger cities being made available to the railway hospitals as and when required and vice versa.

Factories :

48. Special provision should be made available for hospital, domiciliary and clinical care of workers. There should be separate hospitals for the insured patients except when specialist treatment is required.

49. There should be no discrimination whatsoever in the existing Government institutions between the Government servant, the insured patient or the civilian patient.

Plantations :

50. By and large the health care facilities provided in plantations are poor and inadequate. Emphasis has largely been placed on providing expensive medical care facilities without adequate regard to the need of preventive health services. In a majority of plantations, sanitary facilities for health education, immunization programmes, etc. have not been carried out on the required scale.

51. The provisions of the existing law in regard to health in plantations should be enforced by the State health departments.

Tribal and Backward Areas :

52. The major public health problems are those of water supply and sanitation, malaria, tuberculosis, V.D., leprosy and nutritional disorders. The problem is made difficult because of the sparseness of the population, lack of communications and primitive voodooistic outlook of the majority of the tribes to disease. Over-zealousness in providing scientific medicine should not lose sight of the attitudes of the tribes and the village doctor should be treated as an ally by the health worker rather than a rival. The so-called civilising influences should be extended to the tribal people with judgement and discrimination so as not to do violence to certain cultural patterns peculiar to the tribes.

53. One of the most urgent needs of tribal areas is expansion of training facilities so that health assistants, health visitors, sanitary inspectors and other technicians are trained out of local tribal candidates. The standards of basic education applicable to the rest of the country should not be insisted upon for some time to come in such cases. The training centre at Passighat in NEFA should serve as a model and similar centres should be set up in all tribal areas to meet the needs of the tribal population.

54. To meet the shortage of doctors in Tribal areas, suitable tribal students should be selected even while at school for training as doctors and should be given training in State Medical Colleges on condition that they will serve the tribal areas after qualifying.

55. Besides this, duty in the tribal areas for limited periods at least should be made compulsory for members of the Central Health Services and State Health Services.

Private Medical Practitioners :

56. Closer liaison should be established between the private practitioners and the hospital authorities.

57. Government hospitals and dispensaries should profitably utilise the services of private practitioners on part-time or honorary basis.

58. Such practitioners should also be utilised in State schemes of medical care like the Employees' State Insurance Scheme..

59. Private practitioners can co-operate with Government in problems of mass immunization, school health, family planning and health education.

60. To secure the co-operation of private practitioners and to enable them to play a vital role in the matter of medical care to the public, they must be given refresher courses from time to time. Laboratory services at nominal cost and other facilities should be made available to them in the public institutions.

PUBLIC HEALTH

Water Supply and Sanitation

1. Most States are not completely equipped with men and materials to carry out water supply and sanitation programmes. The organisational set up for handling the rural phase of the water supply and sanitation programme is lacking and there is a multiplicity of agencies entrusted with this programme, with the result that progress has been halting and results achieved doubtful. A re-orientation of the existing policy and procedures is necessary.

2. Full-fledged State Public Health Engineering Organisations should be brought into existence and all public health engineering works carried out in consultation with such departments in regard to designs, estimates, etc. where the execution is through recognised agencies.

3. The magnitude of the urban and rural water supply and sanitation programme will involve a large outlay the lowest estimate of which is of the order of Rs. 1,500 crores. The aim should

be to accomplish this entire work within about 25 years, if any tangible improvements are to be expected. A much-needed change in outlook in the management of water supply projects is called for.

4. The practice of Corporations and other local authorities undertaking water supply projects independently has proved unsatisfactory and the recommendation of the Public Health Engineers Conference for the formation of Water and Sewage Boards to serve a number of municipalities and other local authorities in an area is commanded.

4(a). Another direction in which reorientation is necessary, is legislation for conserving water sources and for regulating the exploitation of ground water.

5. It is suggested that the possibility of tapping perennial rivers throwing large quantities of unutilised water into the sea should be explored before their entry into the sea without affecting the riparian rights of any other States. Such water may be collected in reservoirs and carried through conduits to many villages through storage tanks.

6. In areas where there are a large number of rainfed tanks they may be interlinked with one another wherever possible.

7. Another possibility of providing water in coastal areas may be by disalination of sea water.

8. A scheme for the provision of water supply to every village with a population of 5,000 before the end of the Fourth Plan is not too ambitious to put through.

9. It is of the utmost importance that drainage and sewerage schemes should run parallel to water supply schemes in urban areas.

10. Part of the money advanced by Government to local authorities for water supply schemes should be treated as grants. A condition should be made that the schemes undertaken with the help of loans from Government are integrated with drainage and sewerage schemes.

11. Another line of action will be research in the treatment of effluents in such a manner as to bring as high a return as possible with the least investment.

12. Methods of disposal of human excreta most suited to each area will have to be evolved. It is suggested that in every State a pilot project should be set up to study various methods of disposal of sewage and human excreta in rural areas.

13. The Committee is strongly of the opinion that suitable receptacles, hand-carts and other mechanical devices should be provided; and dignified and hygienic methods of collection and disposal of night-soil should be brought into practice.

14. It is felt that not only health education but also punitive measures should be instituted in order to prevent the use of open spaces for defecation.

15. A satisfactory solution of the rural latrine programme will depend more upon an appeal to the civic consciousness of the community rather than on motivation of the individual villager. The Block Development Organisation in each area should take the responsibility to fabricate appropriate rural latrines and to supervise periodical the servicing of such latrines.

16. Competitions at the Block and Zila Parishad levels may be organised where some token of recognition of creditable effort on the part of individuals and communities for the improvement of rural hygiene, may be awarded. Efforts in this direction should be co-ordinated by the various agencies like the Community Development Blocks, Local Bodies, State Departments of Health etc.

17. The sources of air pollution are many and the effects of such pollution on human health are multifarious. It is suggested that the programme for control of air pollution in the bigger cities of India should be given due attention by research, establishment of a monitoring machinery and legislation.

Maternal and Child Health

18. Greatest attention should rationally be given to the care of the health of the children. There is no agency to ensure that a systematic follow-up of ante-natal, midwifery, post-natal, infant and child welfare services takes place. This work must be organised properly.

19. Every effort should be made to develop and expand the network of maternity health centres so that within a period of ten years one midwife is in position for 5,000 to 6,000 population in rural areas, supported by a public health nurse and an auxiliary health worker for twice that number.

20. The Departments of Social and Preventive Medicine should give due importance to maternity and child health. Under-graduates should have more experience and practical training in ante-natal and post-natal care and in midwifery.

21. Enough maternity beds must be provided in teaching hospitals to allow each under-graduate to do the normal quota of 20 cases. Training in mid-wifery should also be domiciliary.

22. Mid-wifery, paediatrics and health education should receive emphasis in the orientation and refresher courses for medical officers, public health nurses and auxiliary health workers.

23. The output of public health nurses, lady health visitors and auxiliary nurse-midwives should be increased considerably.

24. The maternity and child health services in hospitals should be co-ordinated properly with those of the M.C.H. Centres. The centres should register all expectant mothers and induce them to avail of all the services. The services rendered by maternity centres should include immunization and nutrition education, apart from routine mother and child care. Maternity and child health centres, staff should give talks, demonstrations, film shows, family planning education, home visits and health education in the homes of the people. These centres should establish close liaison with agencies like Balvadis for the care of pre-school children.

25. Creches should be set up in commercial and industrial establishments.

26. For children play grounds should be provided.

27. Until there is an adequate number of trained mid-wives, the village dai should be trained for use in certain areas.

28. The Lady Health Visitor and Mid-wife posted to health centres should be responsible for health education, personal hygiene and nutrition.

29. Health centres and referral and district hospitals should form part of an integrated whole with telephone connections and ambulance services in order to attend to abnormal deliveries, surgical cases and blood transfusions.

30. The primary health centres and maternity and child health centres in rural areas should take a greater part in the programmes of immunisation of children and in the notification and checking of births and deaths. They should also attend to the distribution of food supplements like skimmed milk.

School Health

31. The Advisory Boards to be set up at the headquarters and district levels in States on which the Departments of Education, Health, Housing, Agriculture and Social Welfare, are represented, should play an important part in developing policies and programmes connected with the health services for school children.

32. Each Directorate of Health Services should have a Bureau of School Health Services to plan and initiate School Health Service programmes, to co-ordinate the activities of the Government, the

local bodies and voluntary organisations and to establish close liaison with the Education Departments in the States.

33. General hygiene and sanitation in school premises and their surroundings should be improved. Every school must have a source of wholesome water supply, sanitary facilities and regular and proper cleaning up of the class rooms and the school campus.

34. Officers of the Primary Health Centres should consider it their duty to see that sanitary facilities in schools are adequately maintained.

35. The production of birth and vaccination certificate should be made compulsory for admission to schools.

36. Teachers should see to it that lists of students are prepared for re-vaccination after three years and such lists are made available to the medical officers of the Primary Health Centres for necessary action.

37. The school staff should actively assist in inoculation of pupils at the time of any epidemic.

38. The school feeding programmes being carried out in certain States should be watched carefully and steps taken in the light of experience to improve and extend them.

38(a). Kitchen gardens should be cultivated in a large majority of village schools for supplementing the menu for school meals.

39. The Primary Health Centre staff may not be able to cater to the medical coverage of the school population except in 20 to 25 villages. Therefore, for the remaining portion of the Block area the services of private medical practitioners in the nearest towns may be made use of either through a system of per capita fee or by payment of an honorarium. These private practitioners may do periodical examinations and inoculation, while minor ailments may be attended to by the Primary Health Centre staff and the more detailed investigations may be done by the district hospitals, the mobile specialists and the ambulance services, being recommended elsewhere.

Nutrition

40. In spite of the priority given to agriculture in the two Five Year Plans, major emphasis was laid on the increase of food production only, and adequate attention was not paid to increasing the output of protective foods, for the vulnerable groups of the population.

A sound nutrition policy involves collaborative effort on the part of the Ministries of Food and Agriculture, Community Development, Education and Health.

41. The sixty million acres of cultivable land still to be developed and the 70 million acres of fallow land in the country should be fully utilised for production of more food.

42. To cover deficiency in protective foods, milk production should be considerably increased. Production of more fodder, improving the breed of cattle, poultry farming and fish production are other ways for increasing protective foods. Special attention should be paid to the development of vegetables and fruits, exploitation of neglected sources of vegetable protein foods, development of kitchen and community gardens, fish culture and production of processed and synthetic foods.

43. More Nutrition Sections in the State Health Departments should be opened, and the existing ones should be considerably strengthened.

44. Qualified Nutritionists and Dieticians should be employed in public institutions.

45. Iron supplements, protein rich foods, vitamins, etc., should be supplied to the vulnerable groups in rural areas through Rural Health Centres, M. C. H. Centres, Schools, etc. Similar action should be taken in urban areas.

46. Clinical Research Units should be established in teaching hospitals for investigation of diseases associated with faulty diets, for analysis of food stuffs, for study of the effects of storage, processing and cooking and for the study of normal physical and physiological standards.

47. The training facilities for nutrition workers at the Nutrition Research Laboratory at Hyderabad and the All India Institute of Hygiene and Public Health, Calcutta, should be considerably enlarged and a Diploma should be given to those who undergo such training.

48. A large number of institutions for the training of dieticians and nutritionists and nutrition workers should be set up.

48. (a) The recommendation of the Bhore Committee for the establishment of Chairs for Nutrition is reiterated.

49. Considerable precaution should be taken while storing and transporting foodgrains to ensure that such goods are not contaminated with other poisonous substances like folidol.

Mental Health

50. There is a general sense of complacency in regard to mental diseases. There is an urgent need for the setting up of

preventive mental health services, for the expansion and improvement of curative services, for the institution of training facilities and for research and survey programmes.

Housing

51. Early steps should be taken to see that as far as possible, housing accommodation is made available to all employees of State and Central Governments, all industrial workers employed in large factories and all those who are associated with public utility concerns.

52. Any new industrial area should be sufficiently large and well planned to meet the requirements of industrial labour for housing and other amenities.

53. The creation of large towns will no doubt, involve construction of multi-storied buildings but safe-guards regarding pollution of air, easy transport facilities, ancillary necessities like schools, hospitals, play-grounds and parks should all be provided.

54. The removal of slums and provision of alternative accommodation to slum dwellers is another important point to remember.

55. Co-operative housing schemes should be encouraged.

56. The proposal of the Life Insurance Corporation to subsidise housing schemes should go a long way to solve the housing problem.

57. The type of houses in urban and rural areas should be considered carefully from the point of view of public health and sanitation.

58. The policies for Town and Country Planning laid down by the Central Government should be taken full advantage of by the States. There should be a proper town and country planning before housing schemes are sanctioned. All schemes of housing should be regulated by special Boards on which the Health Engineering and Administrative authorities should be represented along with experienced non-officials.

Vital Statistics

59. Health Statistics should not be confined to disease alone but must include, in future, information on the socio-economic and cultural pattern of the community.

60. More and more longitudinal studies should be made in future for purposes of problem measurement and concurrent evaluation.

61. State Bureaux of Health Intelligence should be established.

62. There must be co-ordination between the Vital and Health Statistical units in States and the Registrar-General and international agencies.

63. Centres should be established for the training of officers and other persons engaged in Health Statistics work.

64. A Central Health Statistics Act should be enacted to bring about uniformity in the collection and reporting of health statistics throughout the country.

Health Education

65. In view of the great importance of the subject, all States should establish Health Education Bureaux which must work in co-operation with the Central Health Education Bureau to promote health education of the people and make them health-conscious.

Model Public Health Act

66. In the interest of public health all over the country, the time is come when every State should have a Public Health Act of its own. Such an Act should include all the subjects mentioned in the Model Public Health Act framed by the Ministry of Health.

Physical Education

67. Physical education has yet to receive its due emphasis in this country. The general public should be made aware of the contribution that physical education and sports can make to the balanced development of personality. There is need for a more wide-spread realisation on the part of all concerned that physical education including games and sports is an essential part of education and that no educational system can be called complete if physical education is not allowed to play its full role.

COMMUNICABLE DISEASES

General :

1. Control of communicable diseases cannot be dealt with exclusively as a State subject. It should be simultaneously a Central responsibility. It will be too late and not very effective for the Centre to intervene only in the event of an inter-State spread of infection.

2. There should be an organisational set-up representing the Central Government and the States in each zone to deal with communicable diseases on the lines of the Regional Organisations set up for the Malaria Eradication Programme. Two or three

experts concerned with Communicable Diseases should be associated with this organisation. This will tend to promote greater collaboration and more prompt action wherever necessary.

3. Some compensation (either under the Workmen's Compensation Act or under any other legislation to be passed) should be given to the health personnel, medical and non-medical, who are exposed to unusual risks through contact with patients suffering from communicable diseases.

4. The development of a national outlook through the processes of co-operation and discussion is preferable to the enforcement of action for the control of Communicable Diseases by statutory sanctions.

5. Necessary measures to enforce the legal obligations in regard to the notification of Communicable Diseases should be promoted.

6. The network of Police Wireless Stations may be used for the transmission of intelligence about communicable diseases from rural areas to the nearest District Health Organisation.

Infectious Diseases Hospital :

7. There is prime need to improve the conditions of Infectious Diseases Hospitals so as to make them fit for the treatment of the sick. A modern isolation hospital with facilities for treatment of Smallpox, Cholera, Diphtheria, Plague and other epidemic diseases should be established by every municipality with a population of 50,000. In municipalities of smaller size, isolation wards should be attached to general hospitals for the purpose. In bigger cities like Bombay, Calcutta, Madras, Delhi and Kanpur, there should be as many as three to six separate isolation hospitals distributed in the different parts of the Corporation areas.

8. Apart from Infectious Diseases Hospitals, every General Hospital (including maternity hospitals) should have a small isolation block for the purpose of observation and treatment of cases suspected of communicable diseases.

Public Health Laboratories :

a. Public Health Laboratories equipped to undertake laboratory and field investigations must be considered as the essential pre-requisites in any Communicable Diseases Programme. There should be a chain of such Laboratories in each State. Besides other facilities, they should have a mobile unit for field investigations. There should be a Blood Bank in such laboratories. These laboratories should cater also to the needs of private medical practitioners for the examination of clinical material in connection with the diagnosis of infectious diseases.

Epidemiological Units :

10. Each State should have a fully equipped mobile epidemiological unit capable of proceeding at short notice to any part of the State for field and laboratory investigation on the outbreak of an epidemic.

11. In addition to the small epidemiological units in States, there should be a nucleus organisation at the Centre, the services of which can be called upon by any State in an emergency. The co-operation of the Armed Forces Medical Services may also be taken in this regard.

Malaria :

12. While it is hoped that the Malaria Eradication Programme of the Government of India will achieve the targets in the course of the Fourth Plan period if not in the Third, attention may be drawn to the following problems which are likely to crop up as a result of the mass campaign of this size :

- (a) The question of the possible developments of resistance in the mosquito to the insecticides and the need for the completion of the programme before this becomes manifest on a wide scale.
- (b) The possibilities of insects other than malaria vectors becoming resistant to the insecticide in use, e.g. the rat flea and sand-flies which transmit plague and kala-azar respectively, and
- (c) Careful consideration of the routine use of insecticide to insect-borne diseases of man and animals and also against agricultural pests, in present circumstances.

Filariasis :

13. In view of the evidence of spread of filariasis it is essential to concentrate control measures in the urban centres.

14. The structure and functions of the existing control units should be so modified as to permit them to undertake effective anti larval measures continuously.

15. Filariasis clinics should be established in suitable hospitals in areas where the disease is endemic.

16. There should be a separate section for filariasis in the epidemiological bureaux to be created in each State. This section should work in close co-operation with the Public Health Engineering Section of the State.

17. Health education on the problems of filariasis should be an integral part of the activity of the Health Education Bureau in the State.

18. One research-cum-training unit should be established in each State where filariasis is a major problem.

19. Control of filariasis is not amenable to a crash eradication programme as in the case of malaria. The effort will have to be continued for an appreciable time with adequate financial support before any tangible results can be obtained.

20. While anti-larval measures may be expected to stem the tide temporarily, only adequate drainage facilities can provide the long-term solution of the problem.

Tuberculosis :

21. The emphasis on anti-tuberculosis work must continue to be on the public health aspects including protection of the vulnerable population, early detection of cases, control of the spread of infection and attempts at converting an infective case into a non-infective one within the shortest possible time.

22. Emphasis is also required on early detection of the disease in persons who come into contact with children as well as contacts of active cases.

23. While mass BCG vaccination should continue during the Third Plan, active steps should be taken to integrate BCG vaccination programme and other tuberculosis schemes.

24. Highest priority should be given to the establishment of T.B. clinics so that fully equipped and staffed clinics come into existence in each district with the least possible delay.

25. Since modern chemo-therapy has proved to be very effective and is likely to be the basis of any mass anti-tuberculosis programme, it is essential to ensure that adequate stocks of such drugs are made available at a reasonable cost.

26. The provision of a mobile van equipped with X-ray is essential at each of the T.B. clinics. The mobile vans should visit the taluk hospitals and primary health centres at stated intervals. The district clinic would become the base from which the B.C.G. vaccination teams operate.

27. The setting up of demonstration and training centres in T.B. one for each State, must be considered as a *sine qua non* for the development of an efficient anti-tuberculosis service.

28. Owing to limited hospital beds and extremely poor housing conditions in the country, facilities for isolation of advanced

or infective cases should be provided on a much larger scale than is contemplated at present, and at a much greater speed. At least 50,000 beds should be available in the country for purposes of isolation.

29. In order that at least a part of the total need for hospitalisation can be met, it is suggested that the immediate aim should be for a bed strength of not less than 1,00,000.

30. Rehabilitation and after-care facilities need also to be provided simultaneously.

31. There should be an official in the Directorate of Health Services of each State exclusively in charge of the T.B. programme, both preventive and curative. The State T. B. officers should have adequate training and experience and the entire T. B. service, curative and preventive, should function as one unitary service in the State Health Directorate.

32. T. B. workers, as also others working for control of communicable diseases, should be given attractive remuneration and treated as part of the State Health Cadres, so that normal avenues of promotions are open to them. Private practice should not be permitted to doctors doing such work.

33. Government should give all possible encouragement to non-official and voluntary organisations working in the field of tuberculosis.

Leprosy

34. In the light of present circumstances, segregation cannot be considered as a practical approach for the eradication of leprosy. Emphasis has got to be laid on the early detection and treatment of cases.

35. A determined attempt should be made to train leprosy personnel both medical and para-medical at as many centres as possible. The para-medical workers should be used in as large a measure as possible, thus relieving medical officers from those duties which can adequately be performed by the former.

36. For some time to come, steps will have to be taken to provide facilities for rehabilitation of leprosy patients. Wherever possible simple physiotherapeutic measures should be introduced at treatment centres and attempts should be made to educate patients to take care of their hands and feet. Centres for reconstructive surgery should be established at suitable places.

37. The work of the treatment and study centres in the Third Five Year Plan should be so organised as to permit an assessment of the leprosy problem in the near future.

38. The attempts so far made for the prevention of infection in children by segregating them from their infected parents have not produced any appreciable results.

39. Recent observations indicate the possible use of chemoprophylaxis in contacts as well as the use of B.C.G. vaccination but no positive data are yet available regarding the adequacy of these methods. This is a matter for research.

Smallpox

40. On the termination of the Smallpox Eradication Programme planned by Government, there should be a follow-up by a sustained programme of re-vaccination and primary vaccination of new born babies.

41. An improvement in the method of reporting of vital statistics and adequate supervision of the vaccination work is called for.

The present tendency towards multiplication of agencies for the conduct of immunisation and other preventive programmes, is wasteful and should be avoided.

42. Normal health agencies should take up the work now being done by independent units for tuberculosis, leprosy etc., by making a larger use of para-medical personnel under a qualified medical officer's supervision.

43. In addition to official health services, the services of private practitioners should be utilised on an increasingly large scale.

44. In order to develop immunisation programmes properly, States should carry out pilot studies in selected areas.

45. Up to now, no concerted and properly controlled vaccination drive has been organised. Haphazard measures can never achieve eradication of this disease. The experience gained recently in the pilot projects should be fully utilised when the Smallpox Eradication Programme is launched.

46. In spite of our knowledge of the efficacy of vaccine lymph as a prophylactic against smallpox and the continuing vaccination effort over a century, expected results have not been achieved in India, although limited local experience and experience in other countries show that an organised effort does yield results. Therefore, steps should be taken to deal with it more effectively making full preliminary arrangements such as recruitment and training of personnel, procurement of equipment, manufacture of adequate quantities of lymph etc. before the actual mass vaccination programme starts. The programme must be carried out within a

short period of years taking care to see that new-borns are vaccinated within six months after birth. Thereafter surveillance services should be established to take care of children who have not had primary vaccination.

47. The urgency of the eradication programme is strongly emphasised. The programme should be pushed through on a co-ordinated basis under the direction of a central authority.

48. Attention is particularly drawn to the need for developing the manufacture of freeze dried vaccine on a large scale.

Cholera

49. The recommendations made by the Expert Committee appointed by the Government of India in 1958, to review the question of Cholera and to recommend ways and means to deal with it, are fully endorsed. Extensive measures are needed in West Bengal area for the control of the disease because that area is the most important focus of infection in the country.

Trachoma

50. Taking into account the results of the country-wide studies conducted during the last five years and the efforts already initiated for the control of this disease, it is considered that instead of tackling the problem piece-meal, a comprehensive approach to extend the control activities, especially in those States where Trachoma is known to be a serious public health problem, should be made.

Venereal Diseases

51. Compulsory notification of Venereal Diseases cannot be an effective step so far as India is concerned. Indirect methods will have to be adopted. For this, proper monthly returns may be obtained from all the State on the different types of venereal diseases treated in all institutions. Serological surveys in selected groups of population, random sampling in highly endemic areas, serological testing of all pregnant women are some of the other sources of getting such information.

52. The measures to discourage prostitution and promiscuity should be taken up by social welfare agencies and health education sections of the health services.

53. The National Venereal Diseases Control Programme should be instituted with the long-term objective of reducing the incidence of these diseases to a negligible proportion and eventually eradicating them. Sustained efforts would therefore have to be made for at least the next 20 or 25 years. Greater use will have to be made of epidemiological methods.

54. It is extremely important to have family contacts brought in for testing and treatment at clinics.

55. It is essential to continue and expand systematic programmes on all the therapeutic, educational, epidemiological fronts with periodical assessment of the results achieved. The programme should therefore be integrated with the existing public health services.

56. Free supply of penicillin (PAM) and antigen, to all units, strengthening of Maternity and Child Welfare units for testing of pregnant women and treatment of positive cases, continuation of mass campaigns in areas like Himachal Pradesh and Tehri Garhwal, expansion and strengthening of existing Training and Demonstration Centres, health education, financial assistance to voluntary agencies, establishment of a Central V.D. Reference Laboratory at Madras and regional reference laboratories at Bombay, Calcutta and Delhi, research, improvement of facilities at major sea-ports for V.D. treatment, incorporation of training in V.D. in the training programmes of medical officers for Primary Health Centres and adequate remuneration to people working in the V.D. programmes, are steps that should be taken to achieve the objectives of a V.D. programme.

57. Yaws is a controllable communicable disease. Resurvey and constant vigilance should be maintained by existing health units. Raising the social level of the population concerned will be another necessary measure. The control of yaws should be vested in State V.D. control Officers.

Plague

58. Sporadic cases of plague are reported in certain areas of the country. Fleas concerned in the transmission of plague, are gradually developing resistance to D.D.T. There is evidence of changes in the rat population. *B. Bengalensis*, which is highly sensitive to plague infection, is replacing *R. Norvegicus*. This shift in rat population may create favourable conditions for triggering off the epidemic in human beings. The Public Health Departments of States should, therefore, be alert to the possibility of outbreaks of plague. In the potentially dangerous areas rat elimination measures should be undertaken on a priority basis. The epidemiological units proposed for the State Health Directorates should take over these functions at an early date.

Virus Diseases

59. In view of the practical difficulties in instituting quarantine measures against influenza, these need not be adopted in

future. Facilities may be created at different centres for the production of influenza vaccines at short notice on the lines of the techniques developed by the Pasteur Institute, Coonoor. In the first instance vaccine should be made available for the protection of the special groups of the population such as the medical personnel, transport workers, etc.

60. Enterovirus infections should be studied in more detail.

61. There is a wide prevalence of poliomyelitis in the country in the younger age groups. Steps should be taken in time to prevent development of such infection in the later age groups. Salk vaccine has been used extensively in many countries with encouraging results, although there is evidence to show that the immunity produced by this is comparatively of a short duration. A mass immunisation programme with Salk Vaccine is therefore not practical. It would appear that Sabin's oral vaccine is the vaccine of choice in organising mass immunisation programmes in this country against Poliomyelitis.

62. It is necessary to take steps for the production of oral polio vaccine in centres where facilities are available.

63. There is no specific treatment for infections hepatitis, but special steps must be taken to investigate outbreaks of this disease in greater detail in future. It is possible to prevent its occurrence or spread by use of gamma globulin. Steps should therefore be taken to produce gamma globulin in the country.

64. Facilities should be created for a thorough epidemiological investigation of epidemic encephalitis in children.

65. Studies on the orthopod-borne virus diseases now being carried on in the Virus Research Centre, Poona, should be extended, because they will help in the elucidation of the etiology of many of these infections, the precise nature of which is yet unknown.

66. Unless there is overall improvement in environmental sanitation, no material impact will be made on the prevalence of such infections in the community. A serious attempt should be made to train as many scientists as possible to undertake work in the diverse aspects of the problem at as many centres as possible. As and when such trained personnel become available attempts should be made to develop diagnostic service units for viral infections at suitable regional centres.

67. Knowledge concerning the purification of water supplies is necessary to study the enterovirus infections. Special facilities should therefore be created to develop measures of water purification.

PROFESSIONAL EDUCATION

Undergraduate

1. Whether colleges are run by the State Government or by private agencies the responsibility for recognition of colleges rests with the Universities concerned and no medical college should be started unless the conditions laid down by Universities have been fully satisfied.
2. While appreciating the urgency of stepping up training facilities and opening new medical colleges, it is necessary to see that full information is in possession of the State Government or the authority concerned before the universities are approached for recognition.
3. Before a new medical college is started by a State Government or other agency it should conform to a standard plan laid down for this purpose. The University should appoint a Commission consisting of experienced teachers and experts to decide whether all the conditions are satisfied or not.
4. State Government should not start new colleges without the concurrence of the Planning Commission and of the Ministry of Health if grants are to be given.

It would perhaps be a safe target to aim to have 1 doctor for every 3,000 or 3,500 population at the end of the Fourth Plan period.

There should be one medical college for at least 5 million population, which would mean, taking into consideration the rapid increase in population, that there should be 90 medical colleges for the existing population and for the anticipated population in 1971 the number of medical colleges will have to be nearer 100. Similar targets must be fixed for dental, nursing, pharmaceutical and other para-medical training institutions.

In order to give as much personal attention to individual students as possible, the number of admissions to medical colleges should not ordinarily exceed 100.
5. More than one teaching hospital, properly equipped and staffed, may be utilised for under-graduate training; and it is not necessary to concentrate all students at one teaching hospital during the period of their clinical training.
6. In view of the shortage of medical and public health personnel, the age of retirement should be increased from 55 to 60, subject to physical and mental fitness.
7. The Central Government should give grants for under graduate and post-graduate medical education, on the analogy of

the grants being made by the U.G.C. for post-graduate technological education.

8. In deciding the location of medical colleges and while planning and constructing them the following considerations may be kept in view :

- (a) closer contact with Arts and Science Colleges ;
- (b) the site chosen should be sufficient for future expansion for construction of quarters etc. ;
- (c) it is not necessary to construct a medical college within city limits—in fact it may be desirable to build it in rural surroundings provided facilities like electricity, water and roads are available ;
- (d) the campus for a medical college and hospital should be between 60 to 100 acres ;
- (e) for easy communication between department and department and between departments and the hospital, it will be necessary to have three to four storied buildings with lifts ;
- (f) clinical theatres and demonstration rooms should be made available in the hospital or in the out-patient polyclinics ; and
- (g) the buildings for medical colleges may either be permanent using standard materials or they may be prefabricated structures which will cost much less, according to the discretion of State Governments ;
- (h) provision should be made for libraries in the college buildings on the ground floor ;
- (i) hostel accommodation should be provided to at least 75% of the students ; and
- (j) a high powered Committee with full authority to vet all plans should be set up to prepare a master plan.

9. English should continue to be the medium of instruction in medical colleges.

10. Graduates in mathematics and physical sciences and natural sciences should be encouraged to get admission to medical colleges, provided they possess First or Second Class Degrees and their pre-professional record is of the minimum standard prescribed for admission to medical colleges and provided also that in the pre-clinical course they take up study of the subjects which may not have been covered in the pre-university course.

11. Graduates may be selected in addition to those who have passed pre-professional examination. First and Second class graduates can be admitted to the first year of the medical course, if they have the basic pre-professional requirements for admission. At least 10 per cent of the total admissions should be reserved for such graduates.

12. A separate entrance examination for candidates seeking admission to medical colleges is not recommended. The best course would be to select candidates on the basis of the result of the pre-University or equivalent examination.

13. Where interviews are considered desirable for selecting candidates, not more than 10 per cent of the total marks of the University examination in the subjects concerned should be assigned for the interview and the following factors should be taken into considerations at the interview, among others,

- (i) Extra-curricular activities,
- (ii) Membership of N.C.C., Boy-Scouts, and Girl Guides,
- (iii) Sports, and
- (iv) Personality.

The assessment for sports should be on the basis of the candidate having reached university, inter-university or national ranking.

14. The Selection Committee for admission of candidates to medical colleges should consist of Principals of medical colleges along with a senior educationist of standing nominated by the Vice-Chancellor of the University concerned. There should be a common Selection Committee for all the medical colleges in a State.

15. Merit should be the only consideration in the selection of students.

16. In regard to reservation of seats for scheduled castes, scheduled tribes and backward communities, it is felt that in selecting from these groups only the best among the candidates are selected for medical colleges.

17. A minimum of 5 per cent of the total number of seats should be reserved for special cases like sons and daughters of parents migrating from one State to another, either for official duties or in connection with trade and business. This reservation will not include cases of students coming from outside India and nominated by the Government of India.

18. Twenty per cent of the seats may be reserved for women in certain States where there is a dearth of women students. The

reserved quota of seats will include those admitted on merit. In the event of more than 20% of girl candidates qualifying on merit, there would, of course, be no occasion for any special reservation of seats for them. This special reservation should be only for a transitional period of ten years.

19. The minimum age of admission to a medical college should be 17 plus on 1st October, for candidates joining the integrated course of 6 years and 18 plus for candidates joining the regular medical course of 5 years.

20. The pre-clinical course of instruction should extend to 18 months and the main subjects of study and examination will be Physiology including Biophysics, Organic Chemistry, Bio-chemistry and Anatomy including Histology. Stress should be laid on the practical applications of the above subjects that will follow during the candidates clinical years.

21. The period of clinical training should extend to three and a half years, the first six months being devoted to subjects like Elementary Statistics, Introduction to Psychology and Sociology and Introduction to Medicine.

22. Emphasis during clinical training should be on an integrated method of teaching, the professor of pre-clinical subjects also taking a part and responsibility in the matter.

23. Didactic lectures should be reduced to the minimum and there should be more of clinical lecture-demonstrations with audio-visual aids wherever possible.

24. A proper method of instruction will be to limit it to small groups not exceeding 30 students. Besides clinico-pathological conferences should be held regularly every week both on medicine and surgery and such conferences should be attended by senior students of the 4th and 5th year classes.

25. Too much emphasis on specialities should not be given in the under-graduate course, this being reserved for the post-graduate stage and the housemanship stage.

26. Students should not spend too much time in witnessing complicated operations in theatres. Such operations need be witnessed only by post-graduate students and House Surgeons.

27. The last year of the medical course should be completely devoted to the study of Medicine, Surgery, Obstetrics and Gynaecology and applied aspects of preventive medicine.

28. The existing department of preventive and social medicine should be strengthened and facilities for the training of teachers in this subject should be developed.

29. The teaching of medical jurisprudence should in future be restricted to the broader aspects of jurisprudence including professional behaviour. but so long as a separate cadre of medical jurists is not established in each State and properly trained medical jurists are not made available, the teaching of medical jurisprudence should be continued on the present basis.

30. Examinations in all subjects, other than Medicine, Surgery, Obstetrics and Gynaecology together with applied aspects of preventive medicine and pathology should be completed by the end of the 4th year of the study.

31. The teaching of paediatrics and mental diseases should form part of the under-graduate training. At least a period of three months should be devoted to the medical and surgical aspects of paediatrics and a question or two on paediatrics should form part of the medicine and surgery papers.

32. So far as ophthalmology and otorhinolaryngology are concerned, a separate examination paper may continue to be prescribed where this practice has been in vogue.

33. Examinations by themselves will not serve the purpose of producing a well-qualified basic doctor. Greater importance should therefore be given to the training methods adopted to make the medical students more and more self-reliant. The interest which a student takes in a subject depends upon the particular Professor.

34. While the day-to-day evaluation of the student's work during the training period may be a commendable idea, in actual practice it is doubtful whether such an assessment, to the exclusion of an examination, will be possible, realistic or fair in colleges where a large number of students are admitted and where personal contacts between students and head of the department is not likely to be as intimate as it ought to be. This method of evaluation can be adopted only to this extent, viz. that along with the standard attained by the student in his University examination, he may be given a certificate by the college concerned giving his general attainment during the college career.

35. In regard to orientation in rural health, the system of having certain days of the week when students are taken to villages along with the teachers will be of some benefit. Visits to slums in urban areas should also be included. The Professor of Preventive and Social Medicine and his associates, as also clinical teachers, should take a prominent part in such study tours.

36. Teachers in medical colleges have generally too many students to teach and too little assistance. Teaching facilities are unsatisfactory. Well-qualified and experienced persons are not always

available for teaching posts because of unattractive terms of service. Considerable difficulty is felt in getting qualified teachers for pre-clinical subjects. It is suggested that trained personnel in these subjects from the ranks of non-medical men may be utilized as auxiliaries in teaching, research and other institutions, so that the medical men may be freed from some of their present duties for devoting their time to certain important aspects of teaching and research.

37. In addition to the regular professional staff, teaching work should also be undertaken by other members of the staff who have post-graduate qualifications. A small number of students should be allotted to these people, so that intensive coaching is done when lectures and demonstration classes are not held.

38. Attention should be given to the number of teachers employed in medical colleges in relation to the number of students admitted, the qualifications of these teachers at different levels and their teaching experience. The time has come when some uniform nomenclature should be given to the different types of teachers. A simple classification will be :

- (i) Professor, including Associate or Additional Professor ;
- (ii) Reader or Assistant Professor ; and
- (iii) Lecturer and Registrar.

Lower down in the category will be Demonstrators and Tutors.

39. There should be some full-time paid units in all branches of study in medical colleges particularly in the pre-clinical, laboratory sciences and certain of the clinical subjects.

40. Full-time units should be available in medicine, surgery, obstetrics and gynaecology. All these full-time units should devote their time entirely to teaching and should not engage either in active or consulting practice. In view of difficulties in meeting the entire requirements of teaching and medical relief by full-time staff, part-time teaching units are necessary. Fully qualified persons should be appointed to work as honorary medical officers and assistant medical officers for teaching and for care of patients. The honorarium paid to them should be commensurate with their responsibilities and they should be given the same designation as Professors, Readers or Lecturers, provided they have the required qualifications and experience.

41. There should be a coterminous system of full-time teachers in the categories of Professors, Readers and Assistant Professors, liable to transfer to other teaching institutions.

42. Lecturers should have an occasional experience of working in non-teaching hospitals as well as in the districts. Such people may be selected later for the posts of Professors and Readers.

43. No tutor, demonstrator or registrar should be attached to a teaching hospital for more than five years.

44. Teachers of clinical subjects should have a minimum basic qualification of M.D., M.S. or an equivalent qualification. Teachers of non-clinical and pre-clinical subjects should have a minimum qualification of M.Sc. or Ph.D. Along with these qualifications they should have the requisite number of years of teaching experience.

45. The duties of Registrars should be specified where they function as Lecturers besides collecting records. They should then be equated to the grade of lecturers. Where they work only as Tutors and Demonstrators, they should be equated to such posts.

46. Lecturers should all have post-graduate qualifications in the particular subjects or specialities (A post-graduate diploma or degree in the clinical subjects or a M.Sc. or Ph.D. or equivalent in non-clinical subjects).

47. Taking the basis number of admissions to the medical college to be 100, the teacher-student ratio inclusive of tutors and demonstrators in each department should be 1 : 5.

48. Considerable improvements of out-patient department of teaching hospitals are necessary if the student is to have the full benefit of the variety of cases available in such departments.

49. The following minimum scales of pay are suggested for teaching staff :

Professors	Rs. 1,500-2,500
Associate Professors	Rs. 1,250-2,000
Readers (Asst. Professors)	Rs. 1,000-1,500
Lecturers & Registrars	Rs. 600-1,000
Tutors & Demonstrators	Rs. 350-600

50. Class I scales of pay for those recruited to the Medical and Public Health Posts should be the same as the I.A.S. scales of pay, where it is a running scale depending on the length of service and not on the position held by an individual. The scale of pay of Class II posts should be the same as for other Class II posts in Central Government.

51. Internship has been found to be unsatisfactory and it should be replaced by one year's compulsory housemanship, with provisional registration as a part of the training course prior to final registration in the medical register. Three months of his housemanship period should be spent in Public health work and one of

these three months should necessarily be spent in a Primary Health Centre as an Assistant to the Medical Officer in charge of the Centre. Such housemen should work under the supervision of the Medical Officer-in-charge and should undertake complete responsibility for all types of work pertaining to the Primary Health Centre. They should be provided with free accommodation and a subsistence allowance of not less than Rs. 150/- per month. In general all housemen should be provided with free furnished accommodation within the hospital or as near the hospital as possible, together with a subsistence allowance of not less than Rs. 150/- per mensem.

Licentiate Course

52. It will be unfortunate if at the present stage the proposal for the revival of a short-term medical course is accepted by Government. The licentiates and students trained in short-term courses are not at all likely to settle down in rural areas as is popularly believed. Moreover, rural areas cannot be treated on a differential basis from urban areas. On the other hand, the training of several categories of paramedical personnel suggested elsewhere, would meet the problem of filling up the gap in medical man-power requirements.

Post-graduate Education

53. The training of post-graduates and specialists is very important and urgent because they have to take a prominent place in all teaching institutions, in district and taluk hospitals and in industries.

54. The great paucity of candidates for post-graduate training in pre-clinical subjects should be remedied by grant of stipends.

55. It is felt that every medical college is not immediately fit to be a post-graduate centre for training in the several branches of medicine. The recognition given at present to some of these institutions should depend upon their satisfying the conditions in regard to equipment and personnel.

56. It is felt that the upgraded departments which were started as a temporary measure and which have already served their purpose, should be merged with post-graduate centres wherever established and no more upgraded departments should be created.

57. There should be at least one well-developed post-graduate centre of training in each State where all the specialities will gradually develop.

58. The maintenance of such post-graduate centres should be the entire responsibility of the Central Government for at least the

no ten years if uniformity of standards is to be maintained. Attention is drawn in this connection to the position of higher technological institutions in the field of engineering set up by the Government of India.

58-A. It is suggested that the Ministry of Health may follow the practice of the Ministries of Education and Scientific Research & Cultural Affairs, by giving through the U.G.C. lumpsum grants to post-graduate medical education centres.

59. During the Third Plan a beginning should be made to develop at least six such Regional Post-graduate Centres with the assistance of the Government of India, besides the All India Institute of Medical Sciences, New Delhi. The post-graduate centre at Calcutta should be taken over by the Government of India as a Regional Centre and strengthened for all disciplines. The remaining five Regional Centres should be located at Bombay, Madras, Hyderabad, Lucknow and Chandigarh.

60. The regional post-graduate centres referred to above should serve the surrounding State till such time as post-graduate centres are established in each State.

61. Admission to the post-graduate centres should be on a regional basis.

62. Under-graduate teaching may also be imparted at the proposed post-graduate training centres till such time as it is possible to have separate under-graduate colleges at these places, the number of under-graduates to be trained being limited to 50 in each case.

63. The methods of selection of candidates for post-graduate study need careful examination. The numbers to be trained in a particular speciality must be strictly limited if proper training is to be given.

64. A National Council for Post-graduate Education should take charge of the functions of inspection, recognition and approval of institutions giving post-graduate instruction. The manner in which post-graduate institutions have developed round outstanding individuals in many countries, is far more conducive to effective growth of centres of post-graduate education than a recognition given and continued on the strength of an assessment of the facilities available at the start. It is, therefore, necessary to lay down that recognition once given should not automatically continue. The teaching personnel should be of a high grade and should command the confidence of the medical profession. It would be essential to see that the candidates admitted to post-graduate studies come up to the standards required.

65. It would be a mistake to consider post-graduate medical education without considering also the necessity to provide post-graduate instruction in allied fields, such as, nursing, social medicine, anatomy, physiology, pharmacology, bacteriology, pathology, bio-chemistry and dentistry. The training given in post-graduate centres should be of a comprehensive nature including not only the basic medical sciences but some of the fundamental physical and biological sciences.

66. It is suggested that 80% of the seats in these post-graduate centres should be filled by candidates from the States in the region and 20% should be made available to candidates from other parts of India, until such time as each State has got its own post-graduate Centre. Even then there should be available some seats for graduates from other regions.

67. In selecting the subjects for post-graduate training at any centre, emphasis should be on the qualifications of the teaching staff available there, besides equipment and other facilities.

68. Candidates for post-graduate training should have as a basic qualification either a Master of Surgery or a Doctor of Medicine or some basic post-graduate qualification before specialising in any subject. In selecting candidates for post-graduate studies, preference should be given to those who have obtained prizes and medals in university examinations, those who have passed the M.B.B.S. examination in the minimum period of time, those who have shown special aptitude in any branch of medicine and those others found suitable on their academic records.

69. There should be a Selection Committee for each post-graduate centre consisting of the Vice-Chancellor of the university where the Centre is situated, 3 to 5 Principals of medical colleges of the region and the Director or Deputy Director of Medical Education of the State concerned.

70. A large number of stipends should be available to candidates taking up post-graduate studies in these regional centres.

71. Opportunities should be given to post-graduate students and research workers to participate in teaching, so that they get practice in the method of teaching, such teaching being recognised for appointments to higher teaching posts.

72. For the posts of professors additional and associate professors in the post-graduate training centre the scales of pay should be higher than those obtaining for similar posts in under-graduate institutions.

73. Granting of post-graduate diplomas is recommended, so that such diploma holders will be available for service in different positions other than those for teaching. Persons who are unable

to obtain the requisite standard for a post-graduate degree at a regional centre, but who have otherwise attained a reasonable standard of proficiency may be given Certificates on the analogy of certificate of Graded Specialists in the Armed Forces Medical Services and utilised in district and taluk headquarters hospitals where specialists are badly needed.

74. It will be advantageous to have liaison between Indian Universities and some of the foreign universities so that teams of experts from other countries may be exchanged, seminars held and various problems concerning medical education discussed to mutual advantage. For this purpose State and Central Governments should provide adequate financial assistance.

75. Refresher courses for service doctors and private practitioners should be provided in greater degree. The courses should not merely consist of theoretical lectures but should be accompanied by practical demonstrations and seminars.

76. The training of the general practitioner should be the special responsibility of the profession, of post-graduate teachers and of specialists; and every training institution in the Faculty of Medicine should therefore, make a special effort to see that refresher courses are given as frequently as possible and in a practical manner to the general practitioners.

77. Suitable units should be developed in districts and tehsils for giving opportunities for training of practitioners and for research in community organisation.

78. A Committee on Public Health Practice should be set up under the Indian Council of Medical Research and an Institute for Research in Public Health Practice should also be established in due course.

79. It is considered essential that a large number of technicians should be trained for multi-purpose duties in the field of medicine. All district headquarters hospitals and the larger hospitals with 200 beds can train such multi-purpose technicians.

80. Lay administrators for hospitals are not satisfactory. Hospital administrators should be specially trained so that they can work in close co-operation with medical personnel without unduly trenching on their professional duties or responsibilities.

81. The health and welfare of the student population in medical colleges and other training institutions should be paid greater attention. For this purpose, apart from proper hostel accommodation, facilities should be provided for periodical check-up, free treatment and accommodation in the hospitals, for keeping of all records of illness of each student and for running of canteens

on a co-operative basis under the charge of qualified dieticians in all medical and other institutions.

Public Health Training :

82. For community welfare higher standards of training in the field of public health are necessary, and a large number of medical officers with a minimum period of one year's training in public health, after the basic qualification, should be employed to carry out public health and sanitation measures.

83. Schools of public health should therefore be established in every State in order to provide facilities for the training of medical officers in the field of public health as also various other categories of public health personnel, like public health engineers, sanitarians, public health nurses, maternity and child welfare workers, dieticians, epidemiologists, nutrition workers, malariologists and field workers. They should work in close co-operation with under-graduate and post-graduate institutions in the locality.

84. The Professor of Public Health in the School of Public Health should have a post-graduate degree in public health with 5-8 years' experience in public health work. Similarly teachers in maternity and child welfare should have a Diploma with sufficient training and experience in the subject. One of the senior professors may be appointed as the Director of the School of Public Health, while the administrative duties can be carried on by an Assistant Director.

85. Higher training in the School of Public Health should be in the nature of M.D. or Ph.D.

86. It is felt that there is a scope for a Degree in Public Health being instituted in a University for non-medical personnel, the course of studies covering general public health, communicable diseases and their prevention including immunization, broad aspects of environmental sanitation public health statistics and school health. Such persons can be of assistance to the trained public health worker of the Faculty of Medicine and can relieve the Health Officers of Municipalities of routine duties in the public health field.

87. Public health principles and hygiene should be inculcated in the minds of pupils even at the primary school stage, along with practical demonstrations.

Dental Education

88. The out-turn of existing dental colleges should be doubled.

89. There should be a minimum of one dental college in each State.

90. Facilities should be provided for the training of dentists registered in Part B of the Dental Register.

91. There should be increased facilities for post-graduate training of dentists, so that the requisite number of teachers for dental colleges may become available.

92. The training of dental hygienists and mechanics should be undertaken at all dental colleges. Dental hygienists may be used for elementary dental services in rural areas until fully qualified dentists become available.

Nursing :

93. There should be three grades of nurses, viz. the basic nurse with 4 years of training, the auxiliary nurse midwife with 2 years of training and the nurse with a degree qualification.

94. Candidates admitted to the general nursing course should have the minimum qualification of matriculation or equivalent; and the candidates for the Degree course should have passed the higher secondary or pre-university examination.

95. In view of the need for securing a larger number of recruits for the nursing profession the age of admission can be relaxed to 16 in suitable cases as a transitional measure particularly in States where there are difficulties in recruiting candidates at the age of 17.

96. The medium of instruction should preferably be English for the general nursing course, while the Degree course should be taught only in English.

97. Nurse pupils should not be over-burdened with the routine duties in hospitals, but more attention should be given to training and practical experience. They should not be subjected to too many spells of night duty in hospitals.

98. A larger number of hospitals in the country can be utilised for Nursing Schools. District headquarters hospitals with a bed strength of 75 to 100 should also be utilised for this purpose.

99. The minimum number of admissions to the course should be 12.

100. Student nurses should be provided free furnished accommodation in hostels, free board, free supply of uniforms, laundry arrangements, free books, free medical services, medical

check-up twice a year and suitable recreational facilities. The stipend during training should be a minimum of Rs. 35/- increasing by Rs. 10/- every year.

101. The recommendations of the Committee set up by the Central Council of Health (Shetty Committee) in regard to scales of pay and ratio of nurses to hospital beds etc. are endorsed.

102. There should be a Nursing Advisory Committee in each school for advising on admissions and welfare of the trainees.

103. Each nursing school should have its own-separate budget.

104. The training of auxiliary nurse-midwives should be continued and extended, because it will be necessary for a long time to come to have a second line of trained personnel to meet the needs of the country.

105. The number of auxiliary nurse-midwives to be trained should be phased in such a way that there will be one auxiliary nurse-midwife for 5,000 population by the end of 15 years.

106. The training of midwives should also be continued and they should replace the dais who are now being utilised at certain places.

107. The time is come when fresh thinking on the type of training at present given to health visitors should be done. There should, instead, be a Public Health Nurse with a basic nursing qualification and one year's further training particularly in domiciliary care and other public health aspects of community work.

108. The continuance of the training of dais in certain States as a temporary measure is recommended, till such time as a sufficient number of midwives are trained to replace them.

109. Any person trained in one category of nursing should get an opportunity of being trained in the next higher grade, under conditions to be specified by the Indian Nursing Council.

110. There should also be higher training for the general sick nurse, public health nurse, pediatric nurse, mental nurse, theatre sister, sister tutor and nursing administrator.

111. Promotion of Degree course nurses or basic nurses to posts of higher responsibility should be considered only after a minimum of 3 to 5 years of practical experience after qualification, has been put in.

112. Male nurses should be trained only for certain types of work e.g. mental hospitals, army hospitals, V.D. clinics and rehabilitation centres.

113. In general, sufficiently attractive terms should be given to young girls in order to enable them to take to the nursing profession rather than the clerical profession.

Other Para-medical Personnel

114. There is an urgent need for different types of medical and public health auxiliaries to help doctors and public health workers in various fields. A separate class of persons, called 'Auxiliary Health Workers' should be trained mainly in the field of health to assist public health officers. Such auxiliary health personnel may also be used at Primary Health Centres.

115. Para-medical personnel recruited at present for individual diseases such as B.C.G., leprosy, malaria and filariasis should be given further necessary training in other diseases in order to make them multi-purpose personnel and to attach them to the urban or rural centres. Otherwise there is likely to be an immense loss of man-power.

116. Hospital architects should be specially trained. There should be a cell for hospital architects in each Public Health Engineering Department.

117. Medical and public health technicians, pharmacists, sanitary inspectors, etc., discharged from the Armed Forces every year should be employed in State Health Services either by relaxing where necessary the standards normally required or by giving them an additional short course of training to make up for any deficiencies.

Medical Research

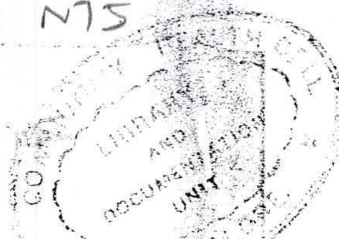
118. If the medical profession of this country is to occupy the place it should in the international world, contributions in the field of medical research are as important as contributions in other fields. India cannot for all times be a debtor country in this respect. Research should form a prominent part in the nations' activities in the field of medicine, greater importance should be given to it and necessary facilities made available.

119. Manufacture of sera and vaccine in the existing research institutes in India may have to continue for some time, but it should not be a permanent feature. The main function of these institutes must be research. The manufacturing side may be separate wings of the institutes manned suitably by trained staff but under the overall supervision of the Director.

120. Apart from operational aspects of research, the institutes should be the main source for two types of research activity, viz., (a) fundamental research and research in regard to certain aspects

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of diseases which may be referred to the institutes and (b) field research to make available to the State concerned valuable data on certain epidemiological conditions or on certain rare diseases which may spring up from time to time or on problems which arise in the very process of giving effect to remedial measures suggested for certain diseases.

121. The research sections of such institutes should have responsibility only in regard to quality testing, standardisation and further research.

122. It is hoped that ultimately the production side will be taken over by the private or public sector, subject to quality testing being done by an independent organisation responsible to the State.

123. Research centres must keep in close touch with the international organisations and it should be their endeavour not merely to co-operate with schemes of research as may be undertaken by international centres but also to serve the very necessary purpose of disseminating the latest information in regard to causation of diseases, methods of treatment and measures for the eradication of diseases.

124. The Indian Council of Medical Research should be a central organisation to collect information from international centres and make it available to the profession through the research centres referred to above.

125. For this purpose the trained personnel at the various research centres will have to be strengthened.

126. Educational institutions cannot divert themselves of the responsibility for research and the best teaching is imparted in those colleges where there is an academic atmosphere of research. Every encouragement should, therefore, be given to research in medical colleges in the country.

127. Any teacher in a medical college who is genuinely interested in research can always find it possible to devote a portion of his time for this purpose.

128. The assistance of various disciplines, both in the faculty of medicine and in allied faculties, is essential for research and the co-operation of the Departments of Bacteriology, Pathology, Biochemistry, Public Health, Radiology, etc. should be obtained by considerably reducing the routine work that is being done in these departments and by augmenting the staff.

129. A research unit should be set up in every medical college with a Pathological, Bacteriological and Bio-chemical section besides such other sections as may be necessary for the investigations that have to be carried out.

130. There should be an animal house in each medical college which should not merely be a shed for animal but should approximate to conditions where hospital treatment can be given to such animals. The animal house may suitably be situated in the top floor of the college building, with separate provision for an operation theatre and post-operative ward for animals.

131. Every post-graduate medical centre must have research facilities and there should be a separate ward of 10 to 15 beds available for the purpose with special nurses for looking after the patients and for periodical observations and maintenance of relevant records.

132. Research on indigenous drugs which is now being done in some of the medical institutions should be extended.

133. As in the case of medical college research units the budget of the various research centres in the country should be separate and specific sums for research must be earmarked.

134. In institutions where a large amount of research work is being done there should be an attached statistical section.

135. Wherever possible there should be close co-ordination between the university departments of science and the departments of medicine in the matter of research.

136. While teachers in medical colleges are expected to interest themselves in research, it is necessary to give them the help of trained research workers or persons with aptitude for research, so that a good deal of routine experimentation and maintenance of records can be done by them.

137. The proposal of the Indian Council of Medical Research to award a number of fellowships to help colleges to extend their research activities is commended.

138. While the responsibility for medical research has been mainly that of the I.C.M.R. so far, it is suggested that Government at the Centre and State levels should realise their responsibility to a large extent and should contribute financially and otherwise to foster research. The responsibility for stimulating research work in the country will, however, largely rest with the I.C.M.R.

139. The reconstitution of the I.C.M.R. is also called for in the light of past experience.

140. In each State a Committee should be constituted to consider research programmes and recommend adequate grants for the same. A permanent allotment should be made for this purpose to different institutions teaching or otherwise, which are expected

to carry on research. The expenditure on equipment, drugs, or appliances should be met by Government.

141. The time is come when in the larger interests of the country there should be established an all-India cadre of research workers, with persons chosen from amongst trained research workers or workers with an aptitude for research who should devote their whole time to research problems. It is noted that a proposal for an all-India cadre of research workers has recently been approved by the I.C.M.R.

142. Whatever may be the method for eradication or control of diseases, it is necessary to have from the start an evaluation unit which will at the commencement draw up the manner in which results of these operations can be recorded and interpreted. Otherwise at the end of a long period of research work no definite conclusions can be arrived at regarding the success or otherwise of the scheme. This Evaluation Organisation should have an all-India pattern.

143. The working of these evaluation teams and the expense therefore should be part and parcel of the particular programme for which the Evaluation unit is appointed, although advice and guidance in regard to methods to be adopted by the teams may be forthcoming from the I.C.M.R.

144. Such evaluation teams will be useful not only in the field of medicine but also in the case of many other projects.

145. So far as industries are concerned two types of research work are urgently needed, viz., one for the industry itself in order to improve methods of production and the other and more important being connected with the health, welfare and safety of industrial workers.

146. In all big industries there must be one or more units for carrying on research in regard to industrial health and the expenditure for research must come largely from the industry itself. Technical advice and assistance for such research should be forthcoming from the Council of Scientific and Industrial Research and the Indian Council of Medical Research. The industrial research units should work in close co-operation with the Employees' State Insurance Corporation.

147. The health and welfare of the people and of the employees of various departments are at present being looked after by different Ministries of Government, namely, Railways, Labour, Health, Industry, etc. It is recommended that the resources of all these Ministries should be pooled together and co-ordinated at a high level to ensure the best utilisation of funds for schemes relating to industrial health and research.

POPULATION PROBLEM

1. Voluntary and social organisations have a large part to play in impressing on the public the necessity of family planning and urgency of the problem by propaganda, education and mass contacts. Financial aid should be given by the Government in an adequate measure to such organisations for this purpose. All possible steps should, therefore, be taken for the increasing association and participation by voluntary and social organisations, particularly in regard to measures of mass contact and education of the public in family planning. The creation of autonomous family planning boards is not, however, considered to be in the best interest of the movement.
2. The dimensions and the urgency of the problem are such that the appointment of a State Minister in the Health Ministry who could give all his time and attention to this work, would be justified.
3. Much more intensive demographic, sociological and anthropological study is necessary for deciding the methods of family planning best suited to each area.
4. The National Council on Population which has already been set up under the Chairmanship of the Home Minister has a Demographic Advisory Committee. It is felt that this Demographic Advisory Committee should continue to function under the Ministry of Health.
5. The educative part of the family planning programme should be adjusted to the availability of services. Indigenous production of contraceptive should have been taken in hand simultaneously with the launching of the family planning programme on a national scale. Therefore, a priority no less high than that of any other major project should now be given to the project of setting up of plants for the production of contraceptive appliances in the country. Priority should also be given in the meantime for foreign exchange for the import of certain contraceptives.
6. The All India Radio should be increasingly utilised for propaganda on family planning. In addition, educative material in all regional languages through films, posters, pamphlets, charts, graphs, plays, shows and other means should be utilised for family planning educational purposes.
7. Family Planning activity should be included within the scope of primary health centres, community development blocks, the Central Social Welfare Board and other similar organisations. The workers in the community development and Panchayat Raj organisations should be oriented in family planning and utilised

to bring home to the people in rural areas the necessity for control of population.

8. The help of political parties should also be enlisted for propaganda purposes.

9. With the existing social patterns and cultural background of the teachers and taught in the large majority of schools and colleges, the inclusion of sex education may not be desirable. Education on the biological lines of life may, however, be imparted in colleges.

10. The demand for sterilisation operations is gaining momentum and it is noted that some States have undertaken large-scale sterilisation according to certain established procedures. This is one of the many sided attacks on the family planning problem. The after-effects of sterilisation should, however, be studied carefully.

11. Laboratory and field research in regard to oral contraceptives should be intensified.

DRUGS AND MEDICAL SUPPLIES

1. There is a case for going into the cost structure of manufactured drugs and bringing the cost down. This can be done under the provision of the Industries (Development and Regulations) Act.

2. It is recognised that while in recent years the final stages of manufacture of drugs have developed fairly fast and a large number of sizeable factories have come up, the extent of dependence on imported raw-materials and intermediaries has only been slightly reduced. The indigenous pharmaceutical industry has therefore to contend with competent know-how, big capital, worldwide sales, unfair competition from mushroom units, and a long and tortuous licensing procedure under the Industries (Development and Regulations) Act.

3. The industry as a whole has not promoted any significant research activity, either on a collective or on an individual basis. This situation needs to be remedied.

4. The universal complaint with regard to excise restrictions on the use of alcohol appears to call for finding ways and means of the regulations not coming in the way of legitimate manufacture.

5. There should be close co-ordination between the Drugs Control Organisation and the Development Wing of the Ministry of Commerce and Industry and the policy in respect of setting up of pharmaceutical industries should be based on the need of the

ultimate consumer rather than on the industrial policy of Government in other respects. It is not therefore that the present deal control should be done away with and the licensing for drugs manufacture should be the function of the Ministry of Health. There should be an appropriate organisation in the Ministry of Health in charge of an officer of standing, capable of dealing with his counterpart in the Ministry of Commerce and Industry at the highest secretariat level.

6. If the pharmaceutical industry is to prosper and if the health of the nation is to be safeguarded, no quarter should be given to any manufacturer merely on the ground of his being a small-scale manufacturer.

7. The Drugs Control Organisation by and large may be said to be extremely inadequate in comparison with the growing needs. It is recommended that in States where any substantial drug manufacture is going on, a fully equipped analytical laboratory should be established with the financial support from manufacturers. Research Wings should be attached to selected laboratories. Strict measures should be taken to enforce the conditions of licensing.

8. In the training of drug control inspectors it would be useful to have at least one or two inspectors adequately trained in "Law", so that the number of acquittals now resulting from technical flaws may be avoided.

9. An Expert Committee consisting of the top men in various specialities should be set up to examine the question of reducing the list of medicinal items permitted to be stocked and sold in the country and to work out a list of the essential drugs and formulations. Normally the import, manufacture, distribution and sale of drugs and formulations should be confined to the list prepared by the Expert Committee. The list will of course, have to be reviewed and revised periodically. In the meantime, Central and State Governments should give a lead by restricting the use, preparation and supply to State hospitals of those drugs and formulations included in the National Formulary. The use of proprietary preparations in Government institutions should be discouraged.

10. The responsibility for the manufacture and sale of sera and vaccines should be that of Government. Such sale should be on a no-profit-no-loss basis.

11. The manufacture of drugs coming under the indigenous systems of medicine should be controlled to ensure standard quality and satisfactory conditions of manufacture. For this purpose drugs used in indigenous medicine should be brought under the provisions of the Drugs Act.

12. Regarding Patent Law, as applied to the pharmaceutical industry, it is recommended that a patent should be for the process

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and not for the product, the specifications of the process clearly described to leave no room for doubt or for blocking the efforts of others in revising the process. The period covered by the patent should be reduced to between 5 and 10 years, extensions not being granted as a matter of course. There should be automatic revocation of patents in the event of manufacture not being undertaken within four years of the grant of such patent. There should be compulsory provisions for the grant of manufacturing licenses under the patent within the period of one year after the date of such an application.

13. The efforts made so far for the manufacture of instruments, hospital appliances, laboratory equipment, etc., have been sporadic and unorganised. There are no standards, little technical know-how and imported raw materials are not readily available. The country should become self-sufficient as early as possible in the manufacture of these instruments and equipment. A panel should be set up to study the position with regard to the estimated requirements of such instruments and appliances, particularly optical and electronic, and to work out detailed specifications. After the recommendations of the panel are received one of the corporations in the public sector may be entrusted with the manufacture; or a new factory in the public sector may be established; or private sector may be allowed to undertake the manufacture. The Technical Organisation in the Ministry of Defence for laying down standards for inspection and testing of instruments and appliances, should be taken advantage of and made to include civilian needs within their scope and functions.

14. Based on the existing Defence Services institutions, similar organisations should gradually be built up in collaboration with the Ministries of Defence and Commerce and Industry.

15. In order to encourage private entrepreneurs in this field a strong technical advisory organisation should be set up in the Ministry of Commerce and Industry to provide guidance and help.

16. Medical stores depots should be modernised, expanded and made to work as public corporations for the manufacture and supply of drugs to meet the needs not only of civil departments, but also of the Defence services. The Civil and Defence Medical Stores Organisations should be merged. They should cover the needs of railways too. For a more effective and expeditious programme of procurement and distribution, the number of depots will have to be increased progressively, so as to provide a closer regional coverage, the ultimate target being one medical stores depot for each State.

17. It would be in the interests of research in general, and of the industry in particular, if ways and means could be found for inducing the pharmaceutical industry to pool their resources with the object of promoting research on medicinal plants. One of the practical ways of giving effect to this suggestion will be to insist on the setting apart by the industry of a certain proportion of their profits for research. This may be in the form of a cess, as is being done in the case of cotton and textile industries.

18. The drug research programme outlined by the Council of Scientific and Industrial Research is endorsed.

19. There is a large scope for the expansion of the activities of the CIMPO under the Ministry of Scientific Research and Cultural Affairs, in regard to cultivation of medicinal plants.

LEGISLATION

1. While it is realised that a great deal has been done to coordinate the standards of training in the different medical colleges under the provisions of the Indian Medical Council Act, a number of difficulties have been felt in this matter by the Universities and the medical colleges. It would not be in the interest of medical education to divest Universities of their responsibilities or to make them feel that they are merely to carry out the recommendations of the Indian Medical Council.

2. The Universities should no doubt accept the standards laid down by the Indian Medical Council and also their advice in regard to major matters relating to professional education, while they should be free to implement details at their discretion.

3. The main responsibility for recognition of medical qualifications should no doubt be that of the Indian Medical Council, subject to the provisions of the Act and also subject to the final approval of the Government of India which acts in this case like the Privy Council of Great Britain.

4. There is no necessity for the Indian Medical Council to seek the approval of the Medical Councils of other countries in regard to recognition of degrees awarded in India. This requires serious consideration.

5. Recognition of degrees should be with reference to a University and not with reference to individual colleges. The suggestion that individual colleges should be recognised by the Council is not one which is consistent with the position of the Universities nor will it improve the standard. A certain amount of time should be allowed for improvement and it is here that the Council's advice would be most valuable. However, some temporary measures may have to be taken to bring the new medical colleges

coming rapidly into existence to the required standard. In such cases as a temporary expedient, individual colleges may be inspected and reported upon for purposes of recognition.

6. While the Universities should get all the advice of the Indian Medical Council they should also see that such advice is implemented with the co-operation of the State Government or other management.

7. The agency which carries out inspection of medical colleges should be much more broadbased and should inspire confidence. Such an inspecting body should consist of an educationist, a representative of the University concerned and three experts nominated by the Council, who should be serving or have served as professors of medical colleges for not less than 10 years. There should be two or three permanent inspectors of the Council, one of whom will be a member of this inspecting body. A representative of the State Government in the case of Government colleges and a representative of the management in the case of other institutions may be co-opted as an observer.

8. The Indian Medical Council as at present constituted may not be in a position to review the recommendations of the post-graduate Committee. In order, therefore, to safeguard and promote the interests of Post-graduate Medical Education, it is suggested that the Post-graduate Committee of the Indian Medical Council should be reconstituted and designated as the Post-graduate Medical Council with 20 members, 10 of whom will be elected by the Indian Medical Council, five elected on a zonal basis by the Universities and five nominated by the Central Government. All the 20 members should possess the prescribed qualification viz. 10-years of post-graduate teaching experience. The recommendations of the Post-graduate Council should be forwarded directly to the Government of India, the Indian Medical Council being simultaneously apprised of those recommendations.

9. The qualifications granted by the Dental, Nursing and other Council in the form of University degrees should be regulated on the same lines as is now being done in the case of the Indian Medical Council.

10. With regard to the Diploma and other qualifications in Nursing, Dentistry, Pharmacy, etc. standards must be laid down with the approval of the Government of India.

11. It is not desirable to allow disparities between the provisions of the different Acts to continue and it is suggested that the Dental, Nursing and Pharmacy Acts should be amended so as to bring them in line with the Indian Medical Council Act.

12. Although certain standards of training have been laid down for pharmacists by the Pharmacy Council, it is felt that as a transitional measure it may be necessary to have somewhat lower qualifications prescribed. This matter may be considered by the Pharmacy Council in consultation with Government of India in the interests of uniformity. The State Medical Council should be the agency to see that the general code of ethics is observed by medical practitioners, a reference being made to the Indian Medical Council before the removal of a name from the State Register. Unqualified persons now in practice should be placed in a separate section of the medical register. Persons possessing qualifications included in the Medical Council Schedule shall alone be placed in the main section of the State Register, and have the right to elect a representative to the Medical Council.

13. It is imperative that steps should be taken to ensure that registration is made an essential pre-requisite before anyone sets up practice. After initial registration subsequent registration should be open only to those who possess recognised qualifications in one or another system of medicine through recognised institutions. The practice of medical profession by persons other than those mentioned above should be made a penal offence.

14. Legislative action is called for in regard to radiological clinics, use of isotopes and other practices involving radiation hazards.

15. In the interests of public health all over the country, the time is come when every State should have a Public Health Act of its own on the basis of the Model Public Health Act framed by the Ministry of Health.

16. In regard to the Drugs Act, an adequate and honest enforcement machinery should be provided. The inspecting and prosecuting agency should be independent of local authorities and should be directly under the State Governments. Facilities for analysis should be provided at Public Health Laboratories on a larger scale than at present. The punitive provisions of the Drugs Act should be made more stringent.

17. Legislative sanction for autopsy examination of dead bodies to enable donation of eyes for corneal grafting, etc. is not likely to have any effect. Methods of persuasion and education are likely to lead to better results.

18. The Indian Lunacy Act is outdated and completely out of context in the present day outlook on mental diseases. No further time should be lost in amending the Act to bring it in line with the present day requirements.

INDIGENOUS SYSTEMS OF MEDICINE

1. Training in Ayurveda and other indigenous systems should be in the Shudha in place of the integrated system.
2. The Central Government should establish in collaboration with State Governments a Central Institute of Medicine for finding authentic and original manuscript and books in Ayurveda scattered in different parts of the country and for publishing them for the benefit of students and teachers.
3. Chairs of Indian system of medicine should be established in all Medical Colleges.
4. The student of Ayurveda should have a good knowledge of Sanskrit: similarly the student of Siddha system should be well-versed in Tamil and the student of the Unani of Medicine in Arabic.
5. They should have the minimum basic qualification of school leaving certificate or matriculation.
6. The preparation of syllabus and courses of study should be left to experts in Ayurveda, Siddha and Unani.
7. The period of study should be about 3 to 4 years, so that students will be able to concentrate their attention solely on Ayurveda, Siddha or Unani.
8. The need for giving a Degree qualification in modern medicine is recognised provided the students are trained upto the standard. The students who qualify in Ayurveda should be given opportunities to be trained in the modern system of medicine after completing the Ayurveda course and after they pass the prescribed examination. The duration of training for the modern system should be 3 to 4 years in such cases.
9. For the majority of those qualifying in Ayurveda, subsequent training in modern medicine should be for a period of 2 to 3 years and should cover preventive medicine, obstetrics and gynaecology and principles of surgery, so that after such training their services can be utilised in the health services. Such training will not, however, entitle them to a Degree in modern medicine.
10. The development of post-graduate centres in Ayurveda, eventually one for each region, is desirable and such a development should be guided by the experience gained at Jamnagar. To encourage graduates in the modern medicine to join such post-graduate centres, the establishment of Chairs of Indian Medicine already recommended will prove helpful.
11. Research in indigenous systems should be done in the Central Institute of Medicine and in modern medical colleges.

Research in respect of medicinal plants, drugs and disease, will be an important function of the various post-graduate and research centres.

12. Post-graduate training should also be available to both medical men trained in modern medicine who have had an intensive training in Ayurveda after their M.B.B.S. and to Shudha Ayurvedic men who have taken a degree in modern medicine.

13. The growth of a body of trained personnel on the lines indicated above is essential in the interests of Ayurveda and modern medicine and the integration of two systems of medicine will eventually come about as a result of the labours of such scientific workers.

14. The Central and State Governments should provide sufficient financial support to trainees in indigenous systems of medicine.

15. Selection for post-graduate education in indigenous systems of medicine should be on merit and candidates so selected should be given stipends.

16. The establishment of a separate council of Ayurveda on the lines of the Medical Council of India is advocated, to set the required standards of training and to ensure uniformity throughout the country. Similar councils for Siddha and Unani will also be of advantage and there should be a co-ordinating committee for the three systems.

17. The newly constituted Council of Ayurvedic Research should work in close collaboration with the I.C.M.R.

18. The task of developing appropriate standards for medical preparations in Ayurveda throughout the country would appear to be very necessary although it may present formidable difficulties. In this task a Central Institute of Indian Medicine, the Post-graduate Regional Institutes, the Research Wings attached to Modern Medical Colleges should all collaborate. State pharmacies should be established and should become the source of all drugs utilized in Ayurvedic hospitals and in dispensaries, maintained by Government and local bodies.

ADMINISTRATIVE ORGANISATION

1. The abolition of the post of Public Health Commissioner and the merger of the organisation with the Directorate-General of Health Services, while good in itself, has indirectly resulted in the weakening of the epidemiological, statistical and other aspects of public health activity, due to inadequacy of staff and the drying up of the sources from which the Directorate recruited experienced health administrators. On the other hand, due to

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increased activities in the health field as a result of the Five Year Plans the need of leadership and co-ordination at the Central level has become more pronounced.

2. It is felt that the Director-General of Health Services should for all purposes, enjoy the status of an Additional Secretary to the Government.

3. While in matters of administration and financial nature the normal channel of communication should be through the Secretary to the Ministry of Health, in purely technical matters the Director-General's views and recommendations should be dealt with at the highest level without the intervention of the Secretariat.

4. Technical advice given by the Heads of Health Services should be directly available to the Minister for Health at the Centre or in the States, subject of course, to comments on financial and administrative angles by the Secretary of the Ministry/Department.

5. A well-staffed and well-equipped Health Intelligence Bureau in the Directorate-General of Health Services is called for. This bureau's task will be to keep itself up-to-date in health intelligence, serve as a model for State and be capable of organising programmes for the training of health statisticians and epidemiologists.

6. If the Central Government is to play the role which it should in the matter of fostering and developing all aspects of medical education, it is essential that a separate division on Medical Education should be formed in the Directorate-General of Health Services. This will be more imperative if the regional organisations which are being recommended elsewhere come into existence.

7. Similar divisions for Medical Education should be set up in the States, with a Deputy Director of Health Services being in independent charge, as Director of Medical Education.

8. A division of Planning should also be a distinct unit of the Directorate-General of Health Services under a Senior Deputy Director-General.

9. Yet another aspect of administrative organisation which deserves serious consideration is that of a permanent machinery in the Directorate for evaluation which would become a normal feature of all major health plans. This machinery for evaluation will be independent of the administrative agency concerned with particular schemes.

10. Strong Health Education Bureaux should be set up in the Central and State Health Directorates. There should be close

liaison between the State and the Central Health Education Bureaux so as to evolve common methods of approach in matters connected with the health education of the public. Audio-visual aids and other methods now adopted in Western countries should be studied and suitably modified to meet the requirements of India.

11. The State Government should also, as in the Central Government, establish separate public health engineering divisions as an integral part of the Directorate of Health Services. The Chief Public Health Engineer in the State should have the status of an Additional Director of Health Services.

12. There should be a separate section dealing with international health matters in the Directorate-General of Health Services. It is essential that a distinct and well-defined cell should come into existence to deal with international and bilateral agencies and to keep itself posted with policy decisions on administrative and financial matters of all United Nations agencies, so that it will be able to brief the Indian delegation to the World Health Assembly fully. The Head of this cell in the Directorate should invariably be the Secretary to the Delegation to the World Health Assembly.

13. The association of non-official experts and leaders in the various professional fields with the health administrations in the country in an advisory capacity should result in not only placing experts at the disposal of the Health Services but also in giving a broader base and a more popular stance to the health policies of Government. Consultative bodies representing the Medical, Dental, Nursing, Pharmaceutical and Public Health Engineering professions should therefore be set up at the Central and State levels to advise the Health Ministers on programmes and policies. The tenure of members of such advisory committees should be 3 years with provision for gradual replacement of sitting members by fresh ones.

14. In the interests of better co-ordination and more effective Centre-State participation in the large number of schemes in which the State is the executive agency but in which the Centre has a financial and functional stake, an administrative tier at a regional level covering three or four States should be brought into existence on the analogy of such organisations in the Ministry of Scientific Research and Cultural Affairs. Such regional offices should be under the charge of officers of the status of a D.D.G. and would serve as a two-way channel for intelligence purposes and also as a liaising agency for schemes of professional education, communicable diseases control, eradication programmes and other matters of common interest. A regional committee, consisting of the Directors of Health Services of the States, Secretaries to Governments of States, some non-official members and representatives of

professional organizations i.e. Medical, Nursing,, Dental and Pharmacist bodies concerned, may be set up which may meet twice a year or oftener to discuss matters of common interest.

15. The technical set-up in States should be headed by the Director of Health Services assisted by a suitable number of Deputy Directors including one for Public Health, one for Medical Relief, a Deputy Director for Professional Education, a Drugs Controller, an Officer-in-charge of Maternity and Child Health, School Health and Family Planning, a Deputy or Assistant Director of Nursing Services and a Deputy Director or Assistant Director for Planning. There should in addition be a Public Health Engineer with the status of an Additional Director of Health Services.

16. The Public Health Engineering Organisation in every State should be attached to the Health Departments and not to the Public Works Departments.

17. The Public Health Engineers of Municipalities and local bodies should be members of the Public Health Engineering Service under the over-all control of the Public Health Engineer of the State.

18. Statistical and epidemiological units should be developed as part of the public health section of each State Directorate.

19. There should be State Health Advisory Boards consisting of Ministers dealing with Health, Housing, Education, Industry, Labour and Local Self-Government. The Chairman of some of the Zila Parishads and a few members of Legislatures should also be on this body, along with the President of the State Branch of the Indian Medical Association. The State Health Advisory Board should survey the health programmes initiated in the State so that these programmes are fully co-ordinated and implemented and should advise Government in regard to measures necessary for improvement of health conditions of all sections of the population.

20. For placing emphasis on preventive aspects of medical care at the peripheral level it is necessary to bring into existence in each State regional organisations between the headquarters and the districts. These regional organisations should be in charge of a Deputy or Assistant Director of Health Services with two or three District Health and Medical Officers, Superintendents for M.C.H., Family Planning and Communicable Diseases and Assistant Public Health Engineers. All hospitals with 300 beds and more should be under the direct control of the Regional Director, all other rural institutions being left to the District Medical and Health Officer.

21. The designation of the officer-in-charge of health at the district level should be District Medical and Health Officer. He

will be responsible for medical care, public health and environmental sanction and will co-ordinate the work of all hospitals with a bed strength of less than 300.

22. In order to co-ordinate the activities of the District Medical and Health Officer and the Regional Director, there should be a Coordination Committee under the Chairmanship of the Regional Director, the Superintendents of Hospitals and the District Medical and Health Officer being members.

23. The Medical Officers, Health Visitors, Auxiliary Nurse Midwives and Sanitary Inspectors attached to Primary Health Centres should belong to the State cadre and should be under the Director of Health Services through the District Medical and Health Officer in regard to technical and disciplinary control. The remaining staff, other than class IV, should be from a district cadre. Disciplinary action against this staff should only be taken in consultation with the medical officer-in-charge of primary health centres with a right of appeal to the Zila Parishad.

24. The problem of integration of medical and public health services should not be postponed, because of certain initial difficulties. In a long-term programme, periodical shifting of personnel from medical to public health and vice versa will be desirable if the problems of medical relief and public health are to be dealt with properly.

25. An All-India Health Cadre should be brought into existence. This service will man posts in Central Ministries other than Defence and provide a quota for State posts, to which officers may be seconded, thus enabling qualified and experienced persons being made available in various fields of work in different regions of the country. The structure of the All-India Health Services should be on the lines of the I.A.S. The Central Health Service now under the consideration of the Health Ministry should be enlarged to provide a deputation quota, so that the requirements of States may be met from time to time. The posts of medical officers under the Employees State Insurance Schemes in the various States should be made a part of the All-India cadre. The time has come when consideration should be given to the pooling of medical officers for all Central institutions through the Health Ministry.

26. A separate cadre of medical jurists should be established, to whom all important and complicated cases will be referred. These medical jurists should be specially trained.

27. The question of seconding officers of the Armed Forces Medical Services of the Civil Department, which proved a great success before Independence, should be revived. Similarly it will

be desirable that people recruited for the Civil Medical Service should have experience of work in the Defence Forces.

28. There should be a permanent organisation for morbidity survey in the country. This organisation should function in co-operation with special surveys for other communicable diseases and with epidemiological units.



**COMPENDIUM
OF
RECOMMENDATIONS
OF
VARIOUS COMMITTEES
ON
HEALTH DEVELOPMENT
1943-1975**

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FINDING PATTERN AND FINANCIAL
PROVISION UNDER FAMILY
PLANNING-1966

(MUDALIAR COMMITTEE)

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SPECIAL COMMITTEE APPOINTED TO REVIEW STAFFING PATTERN AND FINANCIAL PROVISION UNDER FAMILY PLANNING PROGRAMME-1966

SECTION I

INTRODUCTION

1.1 In the first meeting of the Central Family Planning Council held at Madras on the 31st December, 1965, it was resolved that a Committee be formed of the following officers:—

1. Secretary, Ministry of Health & Family Planning, Government of India.
2. Secretary, Department of Health, West Bengal-Calcutta.
3. Secretary, Department of Health, Maharashtra.
4. Secretary, Department of Health, Mysore.
5. Commissioner, Family Planning as Member-Secretary.

“to review what additions and changes are necessary as a result of the greatly altered situation due to the I.U.C.D. having come in the forefront of the programme, in the staffing pattern, financial provisions etc.” The need for such a review had become quite apparent. The 1963 reorganised scheme, while it did rightly emphasize the need to make the programme to the masses, had been approved before the I.U.C.D. programme was adopted for large scale implementation. It provided principally for the free flow of supplies and community education and was based mainly on the use of condoms and on male sterilization. In fact however, because a vast network of distribution centres needed for producing a real impact on the problem through the use of condoms was not organised and because on account of foreign exchange difficulties condoms have been in short supply, so much so that the scheme for their central purchasing and distribution through the Medical Stores Depots introduced in May, 1965 could not be implemented even till today, the main reliance came to be placed on sterilization. Although spectacular results have been achieved in sterilization in a few States where a great deal of enthusiasm for this programme was generated, there can be little doubt that by relying only on this method, the Family Planning Programme could never be made a mass movement which in some ways underlay the philosophy of the 1963 reorganised scheme. It is principally because of the I.U.C.D. method becoming available that a

mass programme has become feasible on account of this method's very great clinical and administrative advantages over sterilization. These advantages have now been well established and have become well known and well accepted. With the possibility thus opened up of developing the Family Planning Programme on a national scale by using all the three principal methods, namely, I.U.C.D., Sterilization and use of condoms, but placing particular emphasis on the first, a realistic assessment has become necessary of the true dimensions that the programme has to acquire and is capable now of acquiring. Without question, the programme has to acquire very large dimensions. Even the figures that constitute the tentative all India targets of the three methods. That have to be reached, spread over a period of 10 years, in order that the birth rate may be brought down from the present 41 per thousand to 25, will show how big the task is. There is every likelihood that the actual task may turn out to be even bigger than these target figures indicate, if account is taken of facts such as, that our vital statistics are defective; that we do not yet know what would be the rate of expulsion and removals of I.U.C.D. over a period of time which is certainly likely to be more than what it is at present when our experience is limited to only a few months; that the task of following-up on the I.U.C.D. programme would get bigger and more difficult as this programme progresses and gains momentum; that much that needs to be known for an effective programme is not yet known as much of the current Planning is being done on the basis of inadequate knowledge, that much of our success so far has been with easier groups of people and in the more advanced areas of the country. It should not be necessary to elaborate these points.

1.2 In the view of the Committee, the following are the principal ways in which the coming in of the I.U.C.D. programme principally affects the situation and the strategy of the family planning programme:—

- (i) target-oriented programming, fixing the targets both for different areas of operation and periods of time, now not only become possible but must be given considerable importance if the ultimate objective of reducing the birth rate of 25 per thousand of population within the stipulated period is to be achieved. The targets should be fixed in terms of results that will directly affect the birth rate. And related to the targets should be the plan for provision of money, staff, equipment supplies etc. which will achieve the targets. In her address in the first meeting of the Central Family Planning Council at Madras, the Union Health Minister had stated that a stage had been reached when we must have targets for different aspects of the pro-

gramme, for each State, for each district, for each city and for each block. While planning targets, it was necessary to plan and organise all the steps necessary to reach the targets. Targets should be reviewed at least once in two months and if there are any short-falls reasons for the lag should be ascertained and rectified without delay. This requires that considerable emphasis be now placed on planning, organisation, administration, supervision and evaluation on the basis of assessment of results through a good and sound system of reporting. This process has to be organised at all levels of implementation, from the State Headquarters down to the block. In order that this requirement should be fulfilled, organisational strengthening becomes a necessity.

- (ii) There is need for considerable strengthening of the educational and publicity effort. While the effect at creating public awareness of the concept of family limitation has to be continued and even intensified much greater effort has to be made to spread the knowledge concerning birth control methods.
- (iii) There is now much greater need for providing the supplies and services almost simultaneously with the motivation. The need for this has already been recognised in the instructions given some time ago that orientation camps should be, as far as possible, accompanied by service camps. This requires that, on the one hand, all difficulties that may come in the way of motivation of eligible couples for accepting the family planning methods of their choice be removed and, on the other, that much larger resources of manpower of the requisite kind be drafted in the service of the programme and all difficulties that there may be in their working with maximum enthusiasm and efficiency be removed. Fortunately, with the I.U.C.D. method it is possible to develop easily and effectively the facilities for rendering this advice of service in all medical institutions, Government or private, medical colleges, M.C.H. Centres, post-partum clinic, well-baby clinic etc. It is important that all such resources should be fully utilised.
- (iv) In order to make the programme a truly mass movement as it has to become, it has to be supported by voluntary agencies and local leadership to a much larger extent than has hitherto been necessary; and their assistance can be taken in a variety of ways as well be mentioned later.

1.3 Arising from the above requirements, the Committee dealt with the following main fields :—

- (i) Organisation.
- (ii) Finance.
- (iii) Resources of manpower.
- (iv) Role of voluntary agencies.
- (v) Training of personnel.

The sections that follow are arranged under these topics.

1.4 The Committee had three meetings of two days each one in Calcutta and two in Delhi. The conclusions reached by the Committee are based not only on the experience of the members constituting the Committee and the discussions amongst themselves but equally on consultations with an participation in the meetings of representatives from other States too, who were specially invited to the meetings. Suggestions had also been invited from all the state Governments and such of the suggestions as came within the scope of the work of the Committee were considered by the Committee and most of them were also discussed with the representatives of the State Governments who attended the meetings. The Chairman of the Committee and the Commissioner, Family Planning, had had the advantage of visiting the States of Mysore, Madras, Andhra Pradesh, Maharashtra, Uttar Pradesh, Madhya Pradesh and Gujarat where they had studied in detail the programme being implemented by these State Governments and discussed its problems in detail with the officials and non-officials like Honorary District Education Leaders, Members of the State Family Planning Board, etc. The Committee also referred to the Evaluation Report of the World Bank (Bell Mission Report), the U.N. Evaluation Report and the Report of the Family Planning Programme and Evaluation Committee and found that many of the conclusions reached by the Committee also find corroboration in these other reports.

1.5 The Committee wish to place on record their sincere thanks to all the invitees who responded to the Committee's invitation and extended considerable assistance to them in their studies. The Committee also wish to record their appreciation of the valuable spade work of collecting material, preparing statements and making available previous references which was done by Dr. H. Banerjee and which greatly facilitated the task of the Committee.

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SECTION II

ORGANISATION

2.1 As has been mentioned in the previous section, the coming in of the IUCD programme makes a mass programme feasible and also emphasises the importance and urgency of building up the requisite instrumental capacity to undertake such a programme. It focusses attention on the need for building up strong administrative machinery from the Central down to the block level which will be able to systematically plan the implementation of the programme on the basis of scientifically worked out targets and to provide the necessary drive, supervision and guidance for the efficient and speedy implementation of the programme. This will require not only that the organisation at different levels is of requisite size and competence, but also that it is well composed and well-manned and the method and techniques of work are improved, procedures are streamlined and everything needed is done to create leadership at all levels so that decision making takes place in a decentralised manner and initiative is exercised at as many points as possible. The training of all the personnel acquires added importance. By and large, these requirements at present are not fulfilled. The preparation of detailed integrated State Plans taking care of all the components that must go to form such a plan, e.g. of education and motivation, of building up of the organisation, of recruitment and training of personnel, financial provisions, fixation of targets scientifically and their distribution regionally as well as by time schedule, the development of a good reporting system and for the scrutiny of the reports and the timely application of correctives. of the follow-up work, particularly of IUCD cases etc., is either largely absent or far from being perfect in the different States. The State Plans have to be broken up into district Plans and even Block Plans and not only should these plans show what has to be achieved during any period of time but should also show in considerable detail what have to be done to achieve the objectives and targets in view. In other words, there should be detailed planning for the implementation of the Plan of achievement, which is hardly being done in the States today. Tasks are being undertaken in an ad hoc manner. In the planning process, little relationship is being established between the goals designed to be achieved and the effort planned to be put in for their achievement. The District, and more so the Block Plan, will have to be kept under constant review and modified from time to time according to changing requirements and circumstances. The task of detailed planning at the district level will assume another dimension. A great deal remains to be done in the field of training. A very pointed reference has been made by the World Bank Mission in their report to the gap that exists and has to be filled

up in the field of training. More has been said on this subject in a later part of the report. That the instrumental capacity has to be sufficiently strengthened and enlarged and at all levels of implementation of the programme has been finding of all the Evaluation teams. They only corroborate the experience of the members of the Committee and of other officers in the States where any serious effort at implementing a sizeable programme has been made.

2.2 The Committee are convinced that for some of the reasons mentioned in the earlier section, it would be wise for us to plan for a much bigger effort than even the laid down targets would seem to require. The very promising results in terms of members achieved in some parts of the country within the first few months of taking up the IUCD programme are not sufficient indication that the organisational strength provided for under the 1963 reorganised programme is capable of achieving the very big targets that have to be achieved to bring down the birth rate to the desired extent in the short period of 10 years. In a programme of this nature seeking to bring about change in traditional beliefs of mostly illiterate people, by appeal to reason, the success achieved in the initial stages, when only small groups and generally the easier ones are tackled, is not enough guarantee that the programme can be given the necessary momentum in the coming years without substantially strengthening the implementing agencies. It would be pertinent to quote here from the report of the World Bank Mission as follows :—

“The numbers relating to various methods are impressive but the base population is so large that massive numbers of effective users are required if there is to be any measurable effect on the overall birth rate”.

It would be natural to expect that many among those who readily accept a family planning method would not use it persistently and effectively. In the coming years more difficult areas and more resistant groups will have to be tackled and more effort would be needed. Further, we will soon have to become more selective than is the case at present in approaching couples for motivating them to adopt the kind of family planning method which will produce the maximum results in terms of reducing births in the shortest period of time. This again will make the task harder and the increase in the number of users of the different methods slower. There is already indication coming from some parts of the country that the rate of increase in IUCD insertions of the early months tending to slow down.

2.3 Our educational and publicity effort needs to be considerably strengthened, as has already been mentioned in the previous Section. We have to use the various forms of mass media

more extensively and effectively and in a much more sustained manner than hitherto, supplemented by the use of special media which is most suitable for different areas and regions and groups of people. Use could be made with advantage of normal commercial channels of distribution of contraceptives for purposes of educational and propaganda work as these agencies will be interested in doing their own promotional work as a part of salesmanship. The use of local leadership on the largest scale possible and going down upto the village level is essential for the success of the programme. The role of voluntary agencies has been considered in a later Section V.

Strengthening the State Headquarters Organisation.

2.4 Keeping the above consideration and requirements in view, the Committee examined in detail the administrative set up at different levels provided under the 1963 organised scheme and give their recommendations below.

2.5 The 1963 reorganised scheme did not provide for any staff for Family Planning for the State Secretariat. All proposals from the State Health Directorate have to be processed by the Secretariat and necessary sanctions given or orders issued. Even with the maximum delegation of powers to the Health Directorate, and this would be a desirable thing to do, there will still be considerable volume of work for the Secretariat, and this work has to be attended to with efficiency and speed if the operation of the programme is not to be hampered. All correspondence with the Central Government will have to be done by the State Health Department. With the increase in the tempo of work in those of the State which have been implementing the programme in a bigger way than others, the work of the Secretariat has already become so heavy that it is no longer possible to deal with it expeditiously without some strengthening of the State Health Department.

2.6 Considering the financial position of the State Governments and their inability to enlarge their responsibility and the fact that the family planning programme is a Centrally sponsored one for which the bulk of the finances are being found by the Central Government, the Committee recommend that the additional staff needed for strengthening the Health Departments of each State should be sanctioned by the Central Government and its cost shared on the same basis as for other similar staff, as a part of the overall scheme. The Committee recommend that there should be a separate cell in the State Secretariat for dealing exclusively with the Family Planning programme. This cell should be headed by an Under Secretary/Assistant Secretary with a small supporting staff so that all proposals relating to the family planning programme can be processed quickly and put up to the

appropriate authorities for expeditious decision. The Committee recommend that this cell should have the following staff.—

Proposed staff for Health Department (Secretariat)

Under Secretary/Asstt. Secretary	1
U. D. Assistant	1
Steno-typist	1
Orderly Peon	1

With this staff, a beginning can be made but it may become necessary before long to further strengthen it if from experience it is found that on the programme gaining more momentum, the increase volume of work that will have to be handled in the State Health Departments (Secretariat) would need more staff.

2.7 The Committee also recommend that a strong executive agency should be created in the Health Directorate of each State Government to deal exclusively with the Family Planning Programme. This agency should have the full support of the various Branches of the Directorate whose support is necessary for the implementation of the family planning programme. This agency should be headed by an officer of adequate status. In the opinion of the Committee, the status of this officer should not be below that of a joint Director of Health Services, otherwise he will not be able to discharge his responsibilities properly nor pull sufficient weight with the other Branches of the Health Directorate. There may be exceptions to this rule when an individual Deputy Director of Health Services, because of his special suitability and experience or, for other similar reasons, may be preferred to a Joint Director, but these can be only exceptions. If the status of the officer is not adequate it would not be possible to delegate to him adequate powers necessary to facilitate the operation of the programme. As has been said earlier, the family planning programme does require that it should function largely in a decentralised manner with delegation of powers to the implementing agency all down the line so that decision making can take place and initiative exercised at all levels of implementation. Though in a State the Director of Health Services/Director of Public Health will be in overall charge of the programme, the officer actually in charge of the State Bureau should have the authority to correspond directly with the Commissioner, Family Planning. The Director of Health Services should confine himself to major matters and should not be burdened with routine matters otherwise there is bound to be delay in taking decisions and other officers will not take initiative and responsibility. The Director should help the Joint Director (F.P.), to secure the cooperation and help of the other officers of the Directorate and should give him guidance and only to the extent that is necessary for purposes of discharging these functions,

that the Director should keep himself informed of what is happening in the family planning programme.

2.8 The Committee would wish to emphasise that the State Family Planning Bureau as the State Headquarters Organisation responsible for the implementation of the programme has to be regarded more as an administrative agency, than one providing the clinical services and should be structured and staffed accordingly. Administration in this context would involve the process of planning, operation, supervision and evaluation. It will not have the responsibility of actually providing the services such as sterilization, IUCD insertions etc. It may continue to be called the State Family Planning Bureau, but the concept of providing the clinical services and of information and advice often associated with a bureau should not be allowed to come to the forefront but instead that of an administrative headquarters. The State Family Planning Bureau should have two major Divisions, namely, Administrative and operational. The set-up which the Committee recommended is shown in Annexure 'C'.

2.9 The Administrative Division should be headed by an Administrative Officer not below the rank of a senior Deputy Collector of the Provincial Civil Service. This Division should attend to all administrative work including budget and should have a small unit which will deal with grants to voluntary organisations. In a later Section dealing with voluntary agencies, we are recommending a certain scheme of delegation of powers to sanction grants to voluntary agencies which will give considerably more work to the State Governments than at present. An Upper Division Assistant should be sanctioned for this cell. The Administrative Section should have a Stores section under a Stores Officer which will be concerned with supply of all types of contraceptives, training materials, charts, hospital equipments for IUCD, sterilization etc. It will organise a proper system of distribution, indenting etc. which will ensure that supplies are always available and in adequate quantities at all points of consumption. This work is very important, will grow in size and complexity and will have to be attended to with efficiency and promptness if the progress of the programme is not to be affected when it begins to gain momentum.

2.10 The Operational Division should be headed by an Assistant Director of Health Services and will be divided into two sections—one to deal with education and information and the other to look after planning, field operation, evaluation and training. The education and information section will be headed by a Health Education Officer who will be responsible for the educational and publicity campaign in the State. We are suggesting a change in the designation of this Officer from the

existing designation 'Health Educator', because we consider it necessary that this officer should function not merely as a Health Educator and in that capacity supervise the work of the District Extension Educators (we have suggested a change in the designation of this officer also as well as amplification of his functions) but also as the Publicity Chief for the programme. We have already mentioned that considerable intensification of the educational and publicity effort is needed. The work of the Health Education Officer, no doubt, will have to be supplemented by the work of the State Publicity/Public Relations/Information Department, but it will be the responsibility of the Health Education Officer to ensure that for the Family Planning Programme, intensive and sustained publicity and educational programmes are kept going in the whole State.

2.11 In view of the predominant role which the IUDC programme will play in the total programme and the multiplicity of tasks and problems that would have to be attended to in respect of this programme, such as of training doctors in IUCD, getting the services of private doctors, arranging the camps and the programmes of the mobile teams (described fully later), arranging supplies, organising the follow-up work etc., the Committee recommend that another doctor should be appointed in the State Family Planning Bureau exclusively for the IUCD programme and a small cell be created for this with an U.D. Assistant.

2.12 The Field Operations Division will have to provide the drive, guidance and help for the operation of the programme in the districts. The officers of this Division will have to keep in constant touch with the programme in the field, review the situation from time to time, identify problems and help in providing solutions. It is through this Division that there should be the kind of constant contact between the State Organisation and the District Organisation that is needed for the successful implementation of the programme. It is very likely that as the programme gains momentum and its magnitude and complexities and the arising problems are more fully realised this Division will need to be further strengthened from what we have suggested in Annexure C. We have already said that training will need special attention. There is already a big gap that has to be filled. The statistical work that will be done in this Division will relate to current statistics needed for purposes of assessing progress from time to time. The more long term studies based on statistics should be undertaken in the State's Statistical Bureau which by so doing will give necessary support to the work of the State Family Planning Bureau. Similarly, the State Health Education Bureau will help in family planning education. These two bureaux

will need to be suitably strengthened. Each State should work out its proposals for such strengthening and the Committee recommend that the cost that will be incurred may be met by the Central Government as a part of the family planning programme.

Strengthening of the District Family Planning Bureau

2.13 The Committee examined in very great detail the requirements of staff at the District level with reference to the nature and load of work that will have to be performed at this level. The district continues to remain the most important unit of administration. The District has also to be the unit for the preparation of detailed operational plans and much of the responsibility for the implementation of the Family Planning Programme will also have to be discharged at the District level. The bulk of the work will be administrative and organisational, involving planning, supervision, evaluation, application of correctives etc. Problems relating to these will predominate and not clinical problems. The Committee recommend that the District Family Planning Bureau should be organised and manned in the manner shown in Annexure D. The existing pattern has also been indicated in the annexure for purposes of comparison. It will be seen that the District Family Planning Bureau will have three Divisions Administration Division, Education and Information Division and Field Operation and Evaluation Division. The administration Division will be in charge of an Administrative Officer of the rank of Sub-Deputy Collector, Tehsildar of the State Civil Service, and should look after general administration, stores and accounts. We have suggested the strengthening of the Accounts Section, to consist of one Accountant, one Assistant Accountant and Cashier because the work of account keeping will considerably increase as a result of some of the recommendations made by us later in the report in regard to payment of incentives, grants to voluntary agencies etc. In a fast moving, diverse and financially well supported programme of the nature of the Family Planning Programme, proper budgeting, accountkeeping and control over expenditure should be given importance. The Education and Information Division should be headed by the Health Education and Information Officer and the Field Operation and Evaluation Division by a Statistical Investigator. The Head of the Bureau would be the District Family Planning Officer who should be a Class I Medical Officer. The work of the Education and Information Division will extend over both the field of education extension as well as general publicity for the programme. Field operations and Evaluation Division will look after the field operation of the programme and its current evaluation. The mode of working of the District Bureau should be the same as of the State Bureau. The District Family Planning

Officer will be wholly responsible for the programme and should have the authority to correspond directly with the officers at the State Headquarters.

2.14 To each District Family Planning Bureau should be attached a mobile sterilization unit and a mobile education and publicity unit. The set-up of the mobile sterilization unit is also shown in Annexure D. There would also be attached to the District Family Planning Bureau mobile units for IUCD according to the population of each district, providing one unit for 5 to 7.5 lakhs of population, depending on the terrain and density of population of the district. The Committee wish to emphasise that much more work with the same manpower resources and this will admittedly continue to remain limited for quite some time will be done with mobile units for IUCD than would be possible from static centres. Moreover, even in the best of circumstances the coverage of the Primary Health Centres, so far as rendering of actual I.U.C.D. service is concerned, will extend to only a few miles round the centre and there are bound to remain big pockets in every district which cannot be served by the Primary Health Centre. The role of the sub-centres will only be educational and motivational; there will be no agency at the sub-centre for actually rendering the clinical services and even its role of guiding the person motivated to go and get service from the Primary Health Centre, will be achieved only to a very limited extent. For quite some time to come it will be difficult for most States to fully man all their P.H. Os. and sub-centres. It should be possible for the I.U.C.D. campaign to forgo ahead of the P.H.C. programme and not depend over much on the latter. The World Bank Mission have also recommended this. It is for these reasons that the Committee strongly recommend the use of mobile I.U.C.D. units to the maximum extent possible, which, of course, will depend on availability of staff, vehicles, equipments etc. Admittedly, the units can be organised only gradually; but that emphasis on the organisation of such units to the largest extent possible and as quickly as possible should continue to be placed, is what the Committee would strongly recommend.

2.15 The Committee have considered the question of attaching the mobile units to the Primary Health Centre as an alternative to their being attached to the District Bureau and are of the view that attachment to the latter would give considerable operational advantages as well as ensure that the units would be put to more fruitful use in a planned manner. It is the Committee's suggestion that for each mobile unit a detailed programme, for one or two months at a time, should be prepared by the District Bureau, sufficiently in advance and circulated to all the workers concerned at the Sub-centres, to village leaders and voluntary organisations, who may be brought into the programme.

so that all the promotional work would have been done in advance of the arrival of the unit at any centre. When the unit does arrive at a centre in accordance with programme all the preparations would have been made and it will be able to accomplish the maximum amount of work during its short stay if one or two days at each centre. After completing the work in one centre, the unit will move to the next centre according to schedule, thus completing the whole programme within the stipulated period. The staff will then remain at the Headquarters for some time and other staff should take over the duties of the mobile unit. In this manner it will not be necessary for the same staff to do long periods of hard touring in the villages nor will they be doing exclusively I.U.C.D. work for long periods, which work can be boring and will, therefore, fail to attract in sufficient number of doctors. The staff of the Primary Health Centres should also be interchanged in a similar manner with the staff of the mobile units. This will give to all the staff working on the programme in the whole district an evenly distributed load of work of all kinds in the medical, public health and family planning programme. To achieve this purpose also it is necessary that the mobile units be attached to the District Headquarters.

2.16 The Committee will further recommend that there should be some administrative arrangements at the district level whereby proper coordination would be established between the District Civil Surgeon, who controls the hospital staff, the District Health Officer and the District Family Planning Officer. If necessary, the senior most among them could be put in overall charge of the entire health and Family planning programme in the District, but only for purposes of effecting necessary coordination that has been referred to. Definite directives should be issued by the State Governments that all concerned officers should give full and effective support to the family planning programme. It will also be an advantage to have at the District level an implementation Committee which may be presided over by the District Collector and should have all important District Officers as its members, particularly those who can lend support in one way or another to the family planning programme. This Committee will review the progress of the programme from time to time, bring about co-ordination in the functioning of the different departments so far as the family planning programme needs it and see that the support of the entire District administration to the extent necessary is given to this programme. This proposal has already been made by the Ministry to the State Government.

2.17 In view of the key role which would be played in the implementation of the programme by the District Family

Planning Bureau, the Committee strongly recommend that the District Family Planning Officer should be a Class I Officer and the post should carry a special pay or allowance and the amount may be appropriately fixed with reference to allowances payable in similar posts in the State. Similarly the officers who would be attached to the mobile units should be paid some allowance for the period they will be on mobile duty. The Committee suggest that an allowance of Rs. 150 p.m. for the Assistant Surgeon will be appropriate. This should be in addition to the T.A. and D.A. that they may be entitled to under the formal rules of the State Government. If the interchange between the mobile and the static duty suggested earlier is not feasible in any case, the officers attached to the mobile units may be retained in that position for a specified period of say one year at a time and may then be put in a some static position.

2.18 It was brought to the notice of the Committee that there are a few very large (some in terms of area, others in terms of population and still others in terms of both) Districts in the country in which an intensive programme cannot be properly managed by one District Family Planning Bureau. To deal with this problem, one suggestion was that the District may be divided into two parts and a Bureau may be sanctioned for each; another suggestion was that one or two sub-bureaus may be started at the Sub-divisional level with less staff than for a full District Bureau. As the Committee could not get enough information and representative opinion on this problem, they are unable to make any recommendation of their own, but do wish to suggest that if concrete proposals are submitted by any State Governments bearing on this problem they would merit consideration by the Central Government.

Urban Family Welfare Planning Centres

2.19 The Committee are of the view that the existing set up should be adequate, but provision should be made for appointment of a sweeper either wholetime or part-time as may be necessary in any case. The Committee also considered the existing organisational set-up for the static and mobile sterilization units attached to the Urban Family Welfare Planning Centres as adequate.

Rural Family Planning Centre (C.D. Block)

2.20 With the revised pattern which now provides for one sub-centre for every 10,000 of population, the staffing pattern for the Block is adequate. While agreeing with the principle

that health service should be provided in an integrated manner and the workers should be multi-purpose for the basic health field, including Family Planning, as far as possible, the Committee is definitely of the opinion that some change is needed in the duties of the Basic Health Worker and Health Assistant, so far as the family planning work is concerned. The duties and responsibilities assigned to the Basic Health Worker will leave him hardly any time for doing any substantial work in the field of family planning and if he is required to do this latter work also, it can only be at the expense of the other health programme. The Committee is, therefore, of the view that the Basic Health Workers should be a multipurpose worker for the general health services, but for family planning he can only provide some information to the people. The Health Assistant (Family Planning) who should have some experience of community health work, can do adequate justice to the Family Planning work, if he is not required to supervise the work of the Basic Health Worker. There should be one health assistant for every 20,000 population, irrespective of whether the area is in the malaria maintenance phase or not. In difficult terrain the limit of population may be reduced to 15,000 or even 10,000.

2.21 There should be one Health Visitor for each unit of 40,000 population to supervise the work of the 4 Auxiliary Nurse-midwives. Since in the staffing pattern there is already provision for one Health Visitor for the Primary Health Centre, this recommendation of the Committee will involve the appointment of only one additional Health Visitor. In the malaria maintenance area there should be one male supervisor to supervise the work of the 4 Basic Health Workers. There is one male supervisor at this level in areas which have not entered the malaria maintenance phase. The recommendation of the Committee, therefore, involves the retention of this person even after the area enters into the maintenance phase. The recommended set up is shown in Annexure E.

2.22. These recommendations are the same as the conclusions that were reached in the Special Workshop organised by the Central Family Planning Institute on "Training of Family Planning Personnel".

2.23 The Committee recommend that wherever District authorities consider that it would be useful to have part-time workers may be appointed on payment of an honorarium of for motivating and bringing cases for vasectomy and I.U.C.D. insertions, such workers may be appointed on payment of an honorarium of Rs. 50 p.m., or alternatively, the honorarium may be

Rs. 30 p.m. and if more than 50 cases of vasectomy/IUCD are brought by the worker in a month he or she may be paid Re. 1 for each additional case above 50. This latter mode of payment will act an incentive for putting in additional effort and enthusiasm into the work. These workers will naturally have to be selected carefully. They will have to be persons having influence in the locality and enjoying a good reputation. The appointment should be made by the District authorities, making it clear to the persons appointed that their continuance in their position will depend entirely on their performance.

2.24 The Committee are of the view that one Honorary District Education Leader cannot cover the whole district sufficiently intensively as is needed for the programme of Family Planning and since the Educational work, which non-official leaders can best do, is of great importance to this programme, the Committee recommend that Honorary Education Leaders should be appointed one for each Block. Such block level leaders should be given an all inclusive honorarium of Rs. 600 per annum to meet their incidental expenses inclusive of the expenses on their touring. They should be appointed for six months at a time and their retention should be dependent entirely on their performance. The appointments should be made by the District authorities. It would be best if these appointments are made by the District Collector on the recommendation of the District Family Planning Officer.

2.25 In concluding this subject of organisation needed at various levels, the Committee would strongly recommend that some flexibility should be allowed in the matter of qualifications of different categories of personnel. The rigid application of the qualifications laid down by the Central Government is creating considerable difficulties for the State Governments in recruiting the necessary number of persons in the different categories. Apart from this, it has also been the experience of the State Governments that even persons possessing the stipulated qualifications have not necessarily turned out to be suitable. For example, young persons fresh from college with M.A. degree in Sociology have proved ineffective as District Extension Educators. It would be best if the State Governments are allowed to frame their own recruitment rules for the various categories of personnel taking into account the availability of candidates and the kind of qualities and experience required in the different posts.

SECTION III

RESOURCE POSITION

3.1 We have already drawn attention to the fact that although the I.U.C.D. method provides very great administrative and clinical advantages which makes a mass programme possible, the need also arises for the employment of doctors and paramedical personnel in much larger numbers. There is not only shortage of doctors for the family planning programme, but also general reluctance on the part of doctors to work on this programme and, were particularly so, if they are stationed in the rural areas, or have to be on mobile duty. The reasons for the reluctance are several. Naturally, the doctors do not wish to get cut off from their wide field of clinical work by being put exclusively on family planning work. Added to this, often by being appointed in the family planning programme doctors suffer in their emoluments. Sometimes they lose house rent allowance and other allowances. In the rural areas if residential accommodation is not provided by Government, houses are difficult to get. Some of the State Governments are imposing conditions on all doctors entering Government service or in some cases even when a student is admitted to a medical college, that they will serve in the rural areas for a certain number of years after joining service or obtaining their degree. The Committee is strongly of the view that along with the imposition of such obligations, a serious effort should also be made by the State Governments to improve the conditions of service of doctors serving in the rural areas so as to compensate them for the hardships of disadvantages. No doctor employed in the family planning programme should suffer any loss of emoluments. If any allowances are being given to other doctors holding other similar posts, not in the family planning programme, the doctors working in the family planning programme should be compensated by being given a suitable family planning allowance. The Committee have already recommended earlier that a special allowance should be given to doctors on duty with mobile units. Rs. 150 p.m. could be regarded as a suitable amount for this allowance. A condition could be attached that at least 150 vasectomies or 300 IUCD, or equivalent combination of these, should be done per month. This would be a test of performance to justify that with the allowance the work is attended to with necessary enthusiasm and earnestness.

3.2 In addition to protecting the emoluments and compensating for the hardships of mobile duty as recommended above, the Committee also strongly recommend that doctors should be given some special incentive, on the basis of their performance in

ensure that they will put in their best effort in the family planning programme. The Committee's recommendations are as follows :—

- (i) Whole-time Government doctors engaged in sterilization camps should be paid Rs. 5 per vasectomy and Rs. 10 per tubectomy if they do this work over and above their full normal duties. Similarly, in IUCD camps they should be paid Rs. 2 per insertion. But in the case of doctors who are withdrawn from their normal duties for the period to be employed in the camps while they should be paid for vasectomy, tubectomy and IUCD at the same rate as indicated above, a deduction of 25% from their total dues should be made because they would not be performing their normal duty for the period that they would be attending to work in the camp.
- (ii) Part-time private medical practitioners who work in family planning centres should be paid a fixed allowance of Rs. 100 per month for working 2 hours a day, three days in the week or for three hours a day, two days in the week. This is also the present practice; but flexibility should be allowed to the State Governments to suit the local situation. Over and above this fixed allowance these part-time medical officers should be given some monetary incentive on the basis of performance, so that they undertake some promotional work also to get larger number of cases. The present system of payment of fixed allowance per month only has not evoked much enthusiasm among the private doctors. The Committee recommend that these part-time doctors may be paid, in addition to the fixed allowance, Rs. 10 per vasectomy over and above 10 cases done in a month and Rs. 2 per IUCD insertion over and above 50 insertions done in a month. There may be combination of vasectomy and IUCD insertions for purposes of calculating the amount of payment due on vasectomy being considered equivalent to 5 I.U.C.D. insertions.

Employment of Private Practitioners in the Sterilization and IUCD Programme

3.3 The employment of more and more private doctors in the sterilization and IUCD programme, particularly in the latter programme, and making the most effective use of them, should be given considerable importance. The hitherto prevalent

attitude among the majority of private doctors that the family planning programme is a Government programme and not a part of their own professional responsibility must be changed. This change has to be brought about by introducing family planning as a part of the regular medical education, (which has already been done) by training private doctors in IUCD work, and by providing them the needed facilities and incentives for doing the work. To quote from the report of the World Bank Mission : "with the use of the IUCD a new role for the private physicians in the national programme becomes evident. To encourage the participation of these doctors is to increase immediately the effectiveness of any programme. For insertion costs to the Government are likely to be lower in the form of a subvention to private doctors than in any other part of the programme."

3.4 These private doctors should be selected carefully. They should be persons of integrity and good reputation. According to the existing pattern private doctors are already being utilised in sterilisation camps and IUCD camps, though not to the same extent in every State. Private doctors are also allowed to undertake insertions of IUCD in their own clinics. The pattern of assistance, however, is not attractive enough to get a large number of private doctors coming forward to work in the programme. The Committee consider that private doctors should also be allowed to do vasectomy operations in their own clinics/nursing homes. These clinics/nursing homes should be carefully selected and only after inspection to ensure that they are suitable for IUCD and sterilization operations. These doctors should be required to submit reports to the State Health authorities, giving all particulars of the patients. After the selection of doctors is carefully made, they can be largely trusted, but some random checks should be done with the information furnished in the reports to prevent malpractice. If the conduct of any doctor comes under suspicion, his name may be removed from the list of approved doctors.

3.5 As regards payments, from the information gathered by the Committee they are convinced that the present rates of payment are not adequate incentive for involving private Medical practitioners in the programme in any large way. The Committee suggest that the following payments be made to private doctors.—

- (i) For the sterilization programme Rs. 10 per case if done in their own clinic or nursing home and Rs. 10 per case subject to a maximum of Rs. 150 on any sin-

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gle day for doing vasectomy in sterilization camps organised by the State Government.

- (ii) For IUCD insertions Rs. 5 per case if insertion is done in the doctor's own clinic/nursing home; Rs. 2 per case if the doctor performs IUCD insertions in a centre run by the State Government within the same town; and Rs. 3 per case subject to a minimum of Rs. 25 per day if done in camps, organised by the State Government. The minimum has been suggested because the number of cases available in a camp depend on its organisers and not on the doctor and not many private doctors would be willing to devote a whole day at the cost of their private practice, without being assured of a minimum payment of Rs. 25.

3.6 The Committee also recommend that in the case of women from the upper strata of society who may prefer to go to their own family doctor for IUCD insertion and will pay for this service, the doctor may be allowed to charge his fees but Government should supply him loops free of charge and the doctor will be required to submit certain returns and statistics to the State Health authorities.

Compensation for the individual

3.7 The Committee consider that for achieving the maximum results it would not be enough only to give to the medical personnel the incentive recommended above. Their efforts would be most fruitful when at the same time the individuals who have to undergo the sterilisation operation or the women who have to have the IUCD inserted, are compensated for the difficulties, loss of wages or any other such disadvantages which they have to suffer. The Committee is aware of the view against giving any financial incentives to persons who undergo sterilization operation or to women who have IUCD insertions, as this is capable of being abused and can lead to malpractices and also because the main reliance in the family planning programme has to remain on the educational and promotional activities. After carefully considering this objection, the Committee remain convinced that some payment should be made to the individual and this would be fully justified. These payments are to be regarded more correctly as necessary for removing the difficulties and disadvantages and not as a financial inducement. The principle has already been accepted in the case of vasectomy where payment can be made to wage earners for loss of wages. There should therefore, be no objection to extend this principle to apply also to IUCD persons in the rural areas are becoming desirous

of having a higher standard of living. They are also becoming conscious of the need for limiting the size of their families, if the gains that are made by increasing agriculture production are to be preserved. So the situation is getting gradually more and more favourable for extending the Family Planning Programme on a mass scale. People are getting ready to adopt family planning methods, and though the extension education method should continue to be applied as the principal means of motivation, it is necessary and important to remove any difficulties that may come in the way of persons motivated to actually adopt the family planning methods of their choice. Women of the poorer classes coming to camps for IUCD insertion lose at least a day's wage; often their husbands or other men-folk accompany them and they too lose a day's wage. Very often children if they are very young and cannot therefore be left alone at home are also brought to the camp and some expense is incurred on their feeling. It is already the experience in several parts of the country where the IUCD Programme has been rapidly catching up that women-folk in the rural areas generally prefer to go to distant clinics or camps for IUCD insertion for reasons of privacy and this involves expenditure to them on the travel. In most cases they have to go to the clinic for check-up once or even twice after the insertion. Already the information seems to be spreading in the areas where IUCD has been rapidly spreading that a number of visits have to be made to the clinic which involve expenditure on travelling. It is, therefore, necessary that some payment is made to meet the expenses of such journeys, if the programme is not to suffer a set-back after some time. The representatives from the West Bengal Government, including the member of the Committee stated that already in some areas of that State it was beginning to appear as if the programme was slackening because of this reason. For the success of the IUCD programme a systematic follow-up of the cases is of utmost importance. If this is not done and cases where there is trouble are neglected it would give a serious set-back to the programme eventually. Even in cases of minor complications following IUCD insertions it always helps to meet the person and remove her fears. For the requirements of this kind of follow-up to it is necessary to encourage, rather than allow a situation to develop where it will discourage, women from coming forward for the IUCD insertions and for subsequent check-up when necessary.

3.8 Taking all these factors into consideration the Committee is strongly of the view that for IUCD insertions a woman should be paid Rs. 5 towards loss of wages, cost of food, transport charges and other incidental expenses. They have given due consideration to the alternative course of Government providing the trans-

port and food. Apart from this not being administratively feasible when the programme gains momentum, it would not take into account the last factor, viz. the expenses to the women connected with the follow-up journeys. According to a decision recently taken by the Standing Committee of the Central Family Planning Council, Rs. 7 to voluntary agencies and Rs. 5 to Government and local bodies will be payable by the Central Government for each IUCD insertion to cover cost of medicines, refreshments, transport and other incidental expenses. There will be no bar to any amount out of this Rs. 7 or Rs. 5 being paid to the woman taking the IUCD insertion by the voluntary agency, State Government or local body. So the principle of such payment is accepted. The Committee's recommendation will ensure that the women does receive the payment which she should, for the reasons stated, and that the amount is adequate. Out of the amounts of Rs. 7 and Rs. 5 intended to cover so many charges an adequate amount cannot be paid to the woman to meet her expenses and remove her difficulties.

3.9 The Committee considered carefully the danger of Malpractice growing out of the proposed payment of Rs. 5 on account of transport, etc. and are of the view that the danger can be unnecessarily exaggerated. It is the Committee's conviction that this danger is certainly less than the danger that will definitely threaten the success of the programme if this payment is not made. This latter danger may not become apparent in the early stages of the programme, but is bound to arise in a sufficiently serious form before long to effect the progress of the programme. There is so far very little evidence to support any belief that any large number of women would resort to the malpractice, or be parties to it, of getting the loop removed and re-inserted to get his payment of Rs. 5 repeatedly. In getting the loop removed they will have to incur some expenditure and what may be left of this payment of Rs. 5 may, therefore, be hardly worthwhile. Also, it is unlikely that many women will submit themselves repeatedly to the examination and insertion of IUCD to make his small amount of money, when account is taken of all the trouble and expense involved in going to a centre, spending the whole day there, incurring expenditure on food, travelling etc. Taking all aspects of the matter into consideration the Committee are convinced that whatever risk there may be in making this payment is very much worth taking and would ultimately be found to work out on the side of the success of the programme. If malpractices to grow, it would be possible to apply correctives without much difficulty, but too rigorous a check from the beginning to guard against the malpractice will not be desirable both because we are convinced the danger is

not so real and great and also because too rigorous a check will affect privacy of the women and hamper the progress of the programme.

3.10 As regards payment for vasectomy, the charges paid at present are all right except that the payment on account of loss of wages may in all cases be Rs. 12. At present no payment has been provided on account of loss of wages for salpingectomy. The Committee recommend for this a payment of Rs. 25 which will provide for loss of wages, for care after the operation and other incidental expenses. Persons undergoing vasectomy operation get six days special casual leave. Persons undergoing salpingectomy operation should be given special casual leave for 14 days when such an operation is not performed during the period of maternity leave. Women undergoing IUCD insertions should also be given one day's special casual leave.

3.11 The Committee was informed that in the States industrial employees were not entitled to any casual leave for sterilisation operation. It is recommended that the Ministry of Labour and Employment should be approached to make it obligatory for industrial establishments to grant special casual leave on the same lines as given to the Central Government employees for sterilisation.

3.13 For providing incentives and promoting a spirit of competition, the Committee recommend :—

- (i) that a special fund be placed at the disposal of the State Governments out of which rewards can be given to the members of the staff for any outstanding work and to villages and groups of villages which show outstanding achievement.
- (ii) that the auxiliary nurse-midwives, nurses, etc., who work beyond their normal hours of duty in camps be allowed an amount equal to their normal daily allowances from the family planning budget, to compensate them for hard work that has to be done in camps.

SECTION IV

FINANCE

4.1 After examining carefully the existing financial pattern and pattern of budget provisions the Committee make the following recommendations which will fill up the present gaps or make up for the deficiency that exist :—

- (i) **Cost of drugs, dressings etc. payable to State Governments, local bodies or voluntary agencies.**—At present there is no provision for this payment in the financial pattern. The Committee recommended that for salpingectomy Rs. 10 per case should be paid for drugs and dressings. For vasectomy Rs. 7 should be payable which will include Rs. 2 for food. For IUCD Rs. 3 per case should be payable for drugs and dressing. This will be inclusive of the expenditure on treatment of cases, which initially on examination are not found fit for IUCD insertion, and on follow-up. Care will be taken to ensure that payments on these accounts are not made twice over, once through hospital contingencies and again separately per case. The Committee are convinced that these payments are necessary if the reasonable expenses incurred by the State Governments etc. are to be reimbursed to them and the treatment of cases initially not fit for insertion and the follow-up are not to be neglected.
- (ii) **Travelling Allowance and Daily Allowance.**—For block level workers there should be a fixed monthly travelling allowance. The amount can be fixed in each case by the State Governments taking into account the amount of touring that officers of the various categories will have to undertake and the scales of fixed T.A. given to officers of similar category in the State.

At the District and State level, a sum equal to 20% of the provision on account of pay and allowances of the officers and staff sanctioned for those levels should be provided in the budget to cover their T.A. and D.A. The provision will be inclusive of the expenses on the mobile teams.
- (iii) **Provident Fund.**—The share of the employers' contribution should be met by the Central Government in respect of staff of the State Governments, local bodies and voluntary agencies.
- (iv) **Hiring of accommodation.**—The State Governments, local bodies and voluntary agencies should be given

authority to hire accommodation, both for office and residential purposes, where there is no provision for construction of buildings or pending the construction of buildings. The scale of accommodation should be such as may be certified by the State Government to be suitable and the rent to be fixed at an amount which the State P.W.D. will certify as being reasonable. This recommendation should apply to all cases, to Family Planning Centres, clinics, training centres, contraceptives distribution depots.

(v) **Maintenance of vehicles.**—Budget provision should be made for the maintenance of vehicles at the following rates :—

- (a) For petrol, oil, lubricants and minor repairs etc. Rs. 6,000 per annum per vehicle. This figure has been reached on the basis of actual expenditure that has been incurred by some of the State Governments. This amount will be treated more or less as ceiling; the actual expenditure incurred will be recoverable from the Central Government.
- (b) For major repairs, replacement of tubes, tyres etc., it is recommended that a fund may be created for this purpose, to which the central government should contribute 10 per cent of the actual expenditure on item (a). This additional amount will be drawn together with what will be admissible under (a) and the State Governments would be expected to meet the charges on major repairs, replacements of tubes, tyres etc. when they arise.

(vi) **Publicity and educational material.**—The Committee recommend that in the field of publicity and mass education, the respective roles of the Central and State Governments should be well defined. While the Central Government could best utilise the all India media, such as the A.I.R., cinema films, newspapers of all-India standing, the State Governments should use the media of local importance, such as, local newspapers, exhibitions, drama and other traditional media best used in the different regions. It was considered that since a total allocation of Rs. 25 lakhs annually would be available for the publicity programmes, a sum of Rs. 1 to 1½ lakhs should be made available for publicity to each State Government. If any special publicity programme like the production of a film were taken up

by a State Government, special provision will have to be obtained for the purpose.

- (vii) General contingencies.—5 per cent of the budget provision on pay and allowances should be provided as general contingencies.

SECTION V

ROLE OF VOLUNTARY AGENCIES.

5.1 Bearing in mind the size which the programme has to acquire and its nature, voluntary agencies must be induced to play an increasing role in its implementation. A much more comprehensive view of voluntary agencies should be taken than has been taken hitherto. It would include all kinds of agencies which are willing to make a contribution in the programme and in whose case a view can justifiably be taken that they will be sincere in doing their work and can be trusted. Voluntary agencies should include those of trade and industry, of labour, local authorities going right down to the village Panchayat level, various kinds of associations, women's organisations, organisations of all-India standing, the Bharat Sewak Samaj, the India Red Cross Society, the Indian Medical Association, etc. Only by having a flexibility of approach towards them would it be possible to bring in large numbers of them in the programme.

5.2 Two conditions should be fulfilled by a voluntary agency to qualify for participation in the programme, apart from their being trust worthy and capable of doing the work they intend taking up, viz. (1) they should have a defined objective which is acceptable as a good and useful objective to promote for purposes of the family planning programme, and (2) the agency should have a level status, permitting the entrustment of public funds to it. It is not necessary that all voluntary agencies should take up all the aspects of the programme. Some may only like to take up the educational and promotional part of the work, others may only be entrusted distribution of contraceptives and still others may be willing to run a centre with all its functions. Some may wish to take up an activity only on some special occasion e.g. organise a Family Planning Exhibition on the occasion of a big *Mela* somewhere, or participate in an educational drive during the Family Planning Week. In admitting voluntary agencies care should be taken not to have overlapping jurisdictions.

5.3 Since it is the Committee's recommendation that large numbers of voluntary agencies should be brought into the programme, it is necessary that the authority to sanction grants-in-aid to them should be decentralised. Under the existing system even with much smaller numbers of voluntary agencies working in the programme, there has been many cases of delay in sanctioning grants-in-aid. This has a particularly dampening effect on voluntary agencies which do not have abundant resources of their own. There has also been persistent demand from State Governments that they and their authorities should have much greater say in giving grants to voluntary agencies. Hitherto not having been given the authority to sanction the grants State Government and their officers have shown a certain measure of indifference in keeping in touch, helping and reporting on the voluntary agencies that have been receiving grants-in aid from the Centre. The Committee will venture to submit that it will help to create greater enthusiasm and feeling of participation in State Governments and thus help in bringing in much greater contribution of voluntary agencies in the programme if State Governments and their officers are entrusted with the "function" of selecting and sanctioning grants to the voluntary agencies.

5.4 The Committee recommend that grants may be sanctioned, both new grants and continuation grants, as follows.--

- (i) Amounts upto 5,000 by the District Family Planning Officers;
- (ii) Amounts exceeding Rs. 5,000 but not exceeding Rs. 20,000 by the State Family Planning Officers;
- (iii) Applications for amounts exceeding Rs. 20,000 should be considered by a Grants Committee, consisting of the Administrative Medical Officer of the State, the State Family Planning Officer and the Regional Assistant Director General of Health Services. The recommendation of the Grants Committee should be submitted to the State Governments. The State Governments should have the authority to sanction grants-in-aid upto and amount of Rs. 1 lakh. Applications for higher amounts should be forwarded to the Commissioner, Family Planning, with the recommendation of the State Government. Commissioner, Family Planning should have full powers to sanction such grants.

5.5 The grants-in-aid should be sanctioned by the various authorities in accordance with the rules to be framed for this purpose. This will obviate the necessity of consulting the Finance Department in every case. These rules should *inter alia* lay down ceilings for the various items of expenditure, but the sanctioning

authority should have power to vary the ceilings under the different items upto a specified limit, say, upto 15 per cent, provided that the pay and allowances of the officers and establishment do not exceed the scales applicable to corresponding personnel of the State Government. Ceiling for contraceptives should not be received.

5.6 The General recommendation made earlier regarding hiring of accommodation and payment of rent for it should apply also in the case of voluntary agencies.

5.7 There should be objective assessment of the work of voluntary agencies with reference to the actual results achieved, every time that the grant is renewed.

5.8 The State Governments should be required to furnish to the Central Government particularly a consolidated statement of expenditure incurred on account of grants-in-aid given to voluntary agencies. For this purpose a proforma can be laid down.

5.9 The Committee recommend that audited statement of accounts prepared by an auditor need not be insisted upon in the case of grants-in-aid not exceeding Rs. 20,000. In such cases the State Government may get the accounts audited by their own auditors. The Committee recommend that one or two auditors, depending on the volume of work, may be appointed for each District Family Planning Bureau to undertake this kind of audit work. These auditors can also help voluntary agencies in receipt of grants-in-aid in the preparation of their accounts, so that there is no delay in submitting their audited statement of accounts to get timely release of the grants-in-aid. The objective should be to help, encourage and guide the voluntary agencies to get the best out of them than to control them.

5.10 Where Municipalities are not able to undertake responsibility for opening Urban Family Planning Welfare Centres according to the laid down pattern, one for every 50,000 of population, or to the extent that they are unable to do this, the State Government should undertake the responsibility and should get financial assistance from the Centre on the same basis as the Municipality would have got. In order that the work in the area of a large Municipality, like that of Bombay, Calcutta, Delhi, is properly planned, organised and implemented, there should be a headquarters organisation which may be of the same pattern, more or less, as of a District and should discharge the same functions. Detailed proposals for this can be worked out by the Municipalities themselves and should be sanctioned and financed by the Central Government.

5.11 It was brought to the notice of the Committee that in several States the programme was not advancing under the Employees State Insurance Corporation as the Corporation have not been able to set up Family Planning clinics under the scheme. The Committee recommend that in such areas where the Employees State Insurance Corporation has not set up family planning clinics, industries and associations of industries who wish to take up Family Planning work on the pattern of voluntary agencies, should be encouraged to do so and should be given financial assistance as to a voluntary agency. This does not affect the Committee's general recommendation that voluntary agencies of trade and industry and labour should be encouraged to participate in the programme to the maximum extent possible and should be given grants for this purpose.

5.12 As regards the pattern of financial assistance to voluntary agencies for the I.U.C.D. programme, the voluntary agencies can be classified in two categories, (i) those that receive separate recurring and non-recurring grant for running Family Welfare Planning Centres, and (ii) those that do not receive such assistance. The Committee recommend that voluntary agencies in the first category should get Rs. 2 for each case of insertion and those in the second category should get Rs. 5 per insertion. This will be inclusive of the charges for drugs and dressings referred to in paragraph 4.1. In addition to this they should also get the charges payable to the State Governments for the *Dai* or neighbour bringing the case, and for food, transport and incidental expenses payable to the women receiving the insertion and the incentives recommended earlier for the doctor.

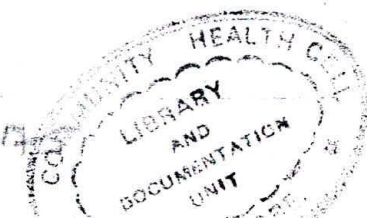
SECTION VI

TRAINING

6.1 In the Section on "Organisation" mention was made of the added importance which training of the personnel require for developing that Family Planning Programme into a mass programme has acquired and the big gap that already exists in this field. The Committee's attention was drawn to the report of the Workshop recently organised by the Central Family Planning Institute on the "Training of Family Planning Personnel". The Committee are in agreement with the Workshop's recommendations. These recommendations will take care of the principal

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requirements of the situation which could be summarised as follows :—

- (a) demarcate the respective spheres of work of the Central and State training centres;
- (b) take care of the much larger numbers of personnel of various categories that will have to be trained now;
- (c) make the initial courses shorter and more job-oriented and provide later for refresher courses, and lay down revised and more precisely defined job description of the various categories of personnel where necessary. Let the requirements of the I.U.C.D. programme get due emphasis in all training and orientation courses;
- (d) provide training to the higher level personnel working in supervisory positions in administration, planning supervision, evaluation and in accounts and budgeting;
- (e) provide for the orientation in family planning through symposia, seminars etc. for leaders of public opinion and also for higher officers of the administration who will have to play a supporting role in the implementation of the programme;
- (f) provide more extensively and systematically for education and training in Family Planning in all medical and public health centres of all kinds and even in other educational courses whenever possible; and
- (g) provide for large scale training of private medical practitioners in I.U.C.D. method.

6.2 The Committee wish to emphasise that the scheme so formulated should be put into effect as soon as possible in order that the big gap that exists at present in the field of training is quickly filled up. The recommendations of the Workshop are appended to this report for facility of reference (Annexure F).

6.3 The State Governments should now quickly draw up a detailed programme of training in accordance with the pattern worked out by the Workshop and implement it according to schedule. It will be important to ensure that the plan for the development of the training facilities of any State is synchronised with that of the recruitment of the personnel of various categories that a situation is not created in which the capacity of the training centres set up is not fully utilised or is short of requirements.

6.4 The Committee recommend that the State Governments should be allowed some flexibility in developing their scheme of training centres and training courses organisation big deviations are made from the pattern formulated by the "workshop" and the total expenditure does not exceed the ceiling of expenditure under the Centre's scheme the flexibility may be allowed in matters such as the place where the various kinds of training will be given, the staffing pattern of training centres, duration of courses etc.

6.5 The Committee also wish to emphasise the need for accelerating the training a paramedical personnel, nurses, auxiliary nurse-mid-wives, etc. required for the Family Planning Programme. The Committee were informed that in several areas of the country it was difficult to get girls with the prescribed educational qualifications for taking the A.N.M. training. The Committee recommend that where such was the case, suitable women from the local area should be recruited and given a short course of training to work as additional female workers. Later on these women could be given further training to make them fullfledged A.N.M. The programme of training of *dais* should also be taken up quickly.

6.6 A training reserve should be created for all cadres equal to 8 per cent of the cadre strength to ensure that the personnel would be released by the State Governments for undergoing the training. This is essential to do otherwise either training capacity will be wasted or the field work will suffer.

ANNEXURE C
State Family Planning Bureau (Staff Proposed)
JOINT DIRECTOR/DEPUTY DIRECTOR

Existing Staff		Administration & Stores Division		Operation Division	
1. Dy. Director, F. P. & M.C.	1	1. Administrative Officer (FP) (Senior Deputy Collector from F.C.S. Cadre)	1	1. Asstt. Director of Health Services (FP)	1
2. State Family Planning Officer.	1	2. Store Officer	1	Education Information	Planning, Field Operation, Evaluation & Training
3. Health Educator		3. Office Superintendent	1		
4. Statistician 1 Statistician Asstt.	1	4. Stenographer	1		
5. Steno-typist	1	5. Inspection Officers of Stores.	2	1. Health Education Officer.	1
6. Superintendent/Health Clerk.	1	6. Upper Division Assistants (One for Stores).	3	2. Upper Div. Clerk	1
7. Assistant/Upper Division Clerk.	1	7. Senior Accountant	1	3. Assistant Editor	1
8. Lower Div. Clerks	3			4. Artist-cum-Photographer	1
9. Driver	1	8. Accountants (one for Stores.)	2	5. Steno-typist	1
					1. Medical Officer Incharge (IUCD Programme.)
					2. Statistician
					3. Statistical Assistant.
					4. Upper Division Clerks

10. Cleaner	1	9. Lower Division Clerks	3
11. Peon	1		
		10. Typists	3
		11. Packers	2
		12. Peons	5
		13. Drivers	2
		14. Cleaners	2
		15. Night Guard	1

ANNEXURE D
District Family Planning Bureau
DISTRICT FAMILY PLANNING OFFICER (CLASS I-OFFICER)

Existing pattern		Administrative Division		Education & Information Division		PROPOSED REVISION	
						Field Operation & Evaluation Division	
1. Distt. Family Planning Medical Officer.	1	1. Administrative Officer (Sub-Deputy Collector/Tehsildar).	1	1. Health Education & Information Officer.	1	1. Statistical Investigator .	1
2. Asstt. Surgeon Grade I (Female).	1	2. Upper Division Clerk .	1	2. Distt. Extension Educator (1 Male & 1 Female)	2	2. Family Planning Field & Evaluation Workers (1 Male & 1 Female)	2
3. Asstt. Surgeon Grade I (Male).	1	3. Accountant . .	1	3. Artist-cum-Photographer	1		
4. Distt. Extension Educators (1 Male & 1 Female)	2	4. Asstt. Accountant .	1	4. Projectionist . .	1		
5. Statistical Asstt. . .	1	5. Cashier . . .	1	5. Driver-cum-Mechanic .	1		
6. Operation Theatre Nurse .	1	6. Upper Division Clerk (Stores).		6. Cleaner . . .			
7. Upper Division Clerk-cum-Storekeeper	1	7. Lower Division clerk-cum-Typist.	2				
8. Clerk-cum-typist . .	1	8. Steno-typist . .	1				
9. Operation Theatre Attendant.	1	9. Peons	2				
10. Projectionist . . .	1						
11. Driver-cum-Mechanic .	1						

12. Cleaner 1
 13. Family Planning Field- 2
 Workers (1 Male & 1
 Female).

STERILIZATION UNIT (MOBILE)
 (One per District Bureau)

1. Assistant Surgeon Grade-I 1
 2. Operation Theatre Nurse I 1
 3. Operation Theatre Attendant 1 1
 4. Driver-cum Mechanic 1
 5. Cleaner 1

MOBILE IUCD UNIT
 (One for 5 to 7.5 Lakhs population)

1. Asstt. Surgeon Grade-I (Preferably a Lady Doctor). 1
 2. Auxiliary Nurse Midwife 1
 3. Attendants (1 Male & 1 Female) 2
 4. Driver-cum-Mechanic 1
 5. Cleaner 1

ANNEXURE E

Rural Family Planning Organisation (In C. D. Block)

(See Paragraphs 2.20 and 2.22)

*Existing Pattern**Main Centres at the P.H.C.*

Asstt. Surgeon Gr. (Women)	1
Extension Educator, F. P.	1
Computer	1
Store-keeper-cum-Clerk-cum-Accountant	1
A.N.M.	1
**Sub-centres (1 for 10,000 population)	
A.N.M.	1
Voluntary Worker to act as female attendant	1
Male F.P. Field Worker (FP Health Asstt.)	1
to sub-centres entering Malaria Maintenance Phase otherwise two per Block.	

*Proposed revision**Main Centre at the P.H.C.*

*Asstt. Surgeon Gr. I.	1
Extension Educator (F.P.)	1
Computer	1
Storekeeper-cum-clerk-cum-Accountant	1
A.N.M.	1
Sub-centres (1 for 10,000 population)	
A.N.M.	1
Voluntary Worker to act as female attendant	1
***Male F.P. Field Worker (F.P. Health Assistant for two sub-centres)	1
****Lady Health Visitor	1
for 40,000 population	

*This Officer should be a lady and all attempts should be made to appoint ladies. If lady medical officers are not available then male medical officers may be appointed.

**3 of the sub-centres are according to original scheme of P.H.Cs. The additional sub-centres above 3 will be financed by Family Planning Programme.

***In difficult terrain the population to be covered by the Family Planning Health Assistant may be reduced to 15,000 or even 10,000.

****Provision for One Lady Health Visitor already exists in the staffing pattern of P.H.C., one additional Lady Health Visitor will therefore meet the requirements of most of the P.H.Cs.

ANNEXURE F

Recommendations made by the Workshop for Training of Family Planning Personnel held in New Delhi from 8th March to 12th March 1966

The workshop for training of Family Planning Personnel came to the following conclusions :—

1. Orientation

1.1 It is affirmed often that family planning should be given the highest priority in national opinions, policies and plans. A powerful favourable public opinion is an essential pre-requisite to this. Towards achieving this purpose the Central Family Planning Institute should explore possibilities of arranging symposiums/seminars for MPs, MLAs, and other leaders of public opinion.

1.2 Seminars should be organised by the State Family Planning and State Health Education Bureaus for administrators at the district level like collector, deputy commissioners, development officers, district extension officers, zila parishad chairman and other.

1.3 Orientation for sub-divisional and block level officers should be arranged. These should be co-ordinated by the regional A.D.Gs. and the Central Family Planning Field Units may be involved in it.

2. Strengthening of other courses

2.1 The All India Institute of Hygiene and Public Health should offer a course in Family Planning in continuation of the D.P.H., D.I.H., D.M.C.W., DHE and public Health nursing courses. This intensive training would be in addition to integration on Family Planning in the regular courses. This course may be standardized by All India Institute for Hygiene and Public Health.

2.2 Other institutions giving similar public health courses may undertake certificate courses not exceeding one month based on the method and content finalised by the All India Institute of Hygiene and Public Health.

2.3 Inclusion of Family Planning content in medical colleges and nursing schools is of great importance. Attempts made in regard to this are noted. Much more needs to be done. The Central Family Planning Institute should pursue this matter further.

2.4 Family Planning content should be included in the course of instructions in the Administrative Staff College, so that the future district officers acquire the necessary conviction, and are able to provide leadership to the programme. The Central Family Planning Institute may explore possibilities.

2.5 Family Planning content in the training programmes of institutions in the Development Departments should be assessed by the Central Family Planning Institute with a view to strengthening it, so that the workers can play an important role in the programme.

2.6 Family Planning instruction should be included in different courses offered by universities so that Family Planning will become a part of the mental make-up of the young people. The Central Family Planning Institute may take this up with the University Grants Commission and the Inter-university Board.

3. Training of Technical Personnel

3.1 General Considerations

3.1.1 Training courses should be job-oriented and less theoretical of as short a duration as possible supplemented with refresher courses, seminars and discussion groups to make up for initial short coming of courses, and also to keep the knowledge up to date.

3.1.2 Contents of the various training programmes may be so organised as to emphasise the importance of training, administration, planning, reporting, assessment evaluation and follow up. Contents may also particularly provide adequate attention to the IUCD programme. It is of paramount importance to-day.

3.2 Allocation of Responsibilities and Mechanism of Training

3.2.1. Training of state training centres should be trained at the Central Family Planning Institute, New Delhi. The following may be the guiding principle.

3.2.1.1 The duration should be 70 working days.

3.2.1.2 They should be trained as a team of all the instructors. Instruction in administration in all of its different aspects—planning, supervision and guidance, reporting and evaluation, and health education should form an integral part of training with the active participation of NIHAE and CHEB respectively.

3.2.1.3 Three such courses should be offered during the year.

3.2.1.4 The number of trainers—trainees in each batch or course should be a maximum of 30.

3.2.1.5 The content of the course should be reviewed in the light of current discussions.

3.2.1.6 In the course of training these trainers should familiarise themselves with the method and content of training of DEPOs and DEEs at the other Central Training Institutions.

3.2.2 District Family Planning Officers should be trained at the All India Institute of Hygiene and Public Health, Calcutta. The following may be the guiding principles.

3.2.2.1 The duration should be 45 working days.

3.2.2.2 Four courses should be offered during a year.

3.2.2.3 A maximum of 30 candidates should be admitted to each course.

3.2.2.4 Content should include administration, planning, budgeting, financing and supervision.

3.2.2.5 Training of the DFPOs should include one week in New Delhi at the Central Family Planning Institute. The NIHAIE, and other senior administrators in Delhi can assist in emphasising the different aspects of administration.

3.2.2.6 The present course offered by the Institute may be modified in the light of these recommendations.

3.2.3 District extension educators should be trained at the Central Health Education Bureau, New Delhi, the Family Planning Training and Research Centre, Bombay, and the Institute of Rural Health and Family Planning, Gandhigram. The following may be the guiding principle.

3.2.3.1 The curriculum developed by the Central Health Education Bureau for the job orientation training of district extension educators for a duration of 60 working days may be adopted with necessary adaptation to give the requisite focus on Family Planning.

3.2.3.2 The Central Health Education Bureau will offer two such courses in a year with 30 trainees in each. The Family Planning Training & Research Centre, Bombay, four courses in a year, initially with 20 trainees each, subsequently to be increased to 30; and the Institute of Rural Health and Family Planning, Gandhigram, two courses in a year with 30 trainees in each. Thus, about 240 DEEs will be trained in a year.

3.2.3.3 Candidates for training in the CHEB will be from Assam, Bihar, Jammu & Kashmir, Punjab, Rajasthan, Uttar Pradesh and West Bengal and the Centrally administered areas except Goa and Pondicherry; for the Family Planning Training & Research Centre, Bombay from Gujarat, Madhya Pradesh, Maharashtra, Orissa and Goa; and for IRH & FP, Gandhigram, from Andhra Pradesh, Kerala, Madras, Mysore and Pondicherry.

3.2.3.4 Coordination of the DEE training programme will be done by the Central Health Education Bureau and they will provide necessary assistance.

3.2.3.5 Directors of the Central Health Education Bureau, the Family Planning Training & Research Centre, Bombay, and the Institute of Rural Health & Family Planning, Gandhigram, will meet and evaluate the common curriculum for the 60 days' training/course for district extension educators. This group should modify the syllabus prepared by the Central Health Education Bureau to suit the training of distt. extension educators based on their job specifications.

3.2.3.6 Staff-student ratio for the district extension educators training programme may be 1:6. The Central Health Education Bureau may also develop Qualifications for the educators and allied staff who may be employed as trainers in these institutions.

3.2.4 The Central institutions will start their training programme as per schedule below:—

3.2.4.1 The Central Health Education Bureau—February and September (District Extension Educators).

3.2.4.2 The family Planning Training & Research Centre, Bombay—February, June, September and December (District Extension Educators).

3.2.4.3 Institute of Rural Health & Family Planning, Gandhigram—April and October (District Extension Educators).

3.2.4.4 All India Institute of Hygiene & Public Health, Calcutta—February, May, August and November (District Family Planning Officers).

3.2.4.5 The Central Family Planning Institute—February, July and October (Trainers of training centres).

3.2.5 The duration of training for each category of other workers and the venue of training should be as under :—

Block Medicas Officer (MO. PAC)	One Week (excluding IUCD and sterilisation)	SFPTC
Lady Assistant Surgeon . . .	15 days	SFPTC
Block extension educator . . .	One month	Do.
Health Assistant . . .	One month	Do.
Lady Health Visitor . . .	7 days	SFETC/Distt.
Comptor . . .	7 days	District
Auxiliary Nurse midwife . . .	7 days	Distt./PHC
Health Inspector . . .	4 days	Distt./PHC
Basie Health worker . . .	3 days	Distt./PHC
Storekeeper-cum-Clerk . . .	3 days	PHC

Training at the district and PHC levels is contingent upon facilities being available e.g. a training cell in a district Family Planning Bureau.

3.2.6 As a follow up of the training programme the various training institutions may organise refresher courses for personnel who have taken the initial training.

3.3. Special Groups

3.3.1 The general practitioners of medicine who have facilities for inserting IUCD may be given special short orientation training. Wherever possible the local IMA and the Government agencies may provide the necessary training.

3.3.2 The Commissioner, Family Planning and the Central Family Planning Institute may take steps to help agencies like Railways, Defence, Industry, Labour, Voluntary Organisations, etc. in training their personnel in the implementation of the Family Planning Programme with special emphasis on IUCD.

3.4. Refresher seminars

3.4.1 Orientation seminars for senior general and health administrators at the national and State levels should be organised by the Central Family Planning Institute. These may be held in different parts of the country, each seminar catering to the needs of a small group of States.

3.4.2 The Central Family Planning Institute should organise short seminars for special groups with a view to discussing administrations, planning, budgeting, and programme, planning and implementation.

3.4.3 In annual seminar for State Family Planning Officers, and other officers directly connected with the family planning programme like those in MCH, Health Education, Vital Statistics, should be organised by the Central Family Planning Institute. These seminars may be held in different parts of

the country. Teachers and research workers in these fields should be invited to attend these seminars. It was suggested that this seminar may follow the family planning workers' conference that may be held annually in which the officers mentioned above will also participate.

3.4.4 In annual conference on family planning to be attended by workers at all levels may be organised by the Commissioner, Family Planning.

4. Administrative considerations

4.1 There should be a training division in the family planning Commissioner's Office, adequate in size and capacity to undertake the responsibilities involved.

4.2 The Commissioner, Family Planning may assume the responsibility for implementing and coordinating training from the operational point of view, announce the courses to the States, ensure that the trainees are deputed in time as per capacity of the various institutions and evaluate the effectiveness of the training programme. Subsequent enquiries in regard to training may go direct to the institution concerned.

4.3 The Commissioner, Family Planning may also provide staff and resources necessary for each training centre to take up the new responsibility.

4.4 Certificates may be awarded to the trainees on successful completion of the course by the training centre concerned, under the signature of the Director of the Institute and the Head of the Faculty. These certificates should be recognised by the Govt. of India.

4.5 A report of each training course offered by the Central institution, should be prepared within a month after the end of the course and circulated to other training institutions. A form for uniform reporting will give all the information necessary for the purpose in view, should be designed by the Central Family Planning Institute.

4.6 Faculties of each of the training centres may meet at least once a year at the different training institutions. This will give a scope for visiting faculty to discuss the training programmes with the staff the host institute and visit their field training areas so as to review and modify the training programme and bring uniformity and standardisation in the total curriculum.

4.7 The group also felt strongly that training cells should be established in every district and should include one health educator and one public health nurse. This would be in addition to a training centre for every 10 million population.

4.8 In most states, the field units are doing good work. In some States where they have so far not proved very useful they could be made more useful. All the units should be continued, and wherever necessary they should be strengthened. If any State needs one more unit, this should be provided. These units would be most useful in the training of family planning workers at the field level where the state training organisation is not yet strong enough to take the entire burden of such training. These few units can also be very useful in giving orientation training to various lay groups. They could also take up the work of mass communication and evaluation of specific programmes, and in some places, could even lend a hand in the service programme. What specific role any unit should play should be determined by the State authorities as a part of the total training programme of State. The units should work under the direction of the State D.H.S. and be administratively controlled by the State Authorities although they will continue to be treated as Central units for financing purposes. In this manner it would be ensured that these field units work in unison with the State policies.

4.9 It is necessary to examine the extent to which existing rural health training centres, and training centres administered by the development department can be utilised in training family planning personnel.



**COMPENDIUM
OF
RECOMMENDATIONS
OF
VARIOUS COMMITTEES
ON
HEALTH DEVELOPMENT
1943-1975**

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**IV—REPORT OF THE COMMITTEE
ON MULTIPURPOSE WORKERS
UNDER HEALTH & FAMILY
PLANNING PROGRAMME—1974
(KARTAR SINGH COMMITTEE)**

REPORT OF THE COMMITTEE ON MULTI-PURPOSE WORKERS UNDER HEALTH & FAMILY PLANNING PROGRAMME—1974

INTRODUCTION

1.1 National programmes in the field of Health, Family Planning and Nutrition have been in operation in the country for many years. In general, these programmes are being run almost independently of each other by staff recruited under each programme. There is little or no coordination between the field workers of these programmes and even at the supervisory level there are separate and independent functionaries. Though in the majority of these programmes, a Primary Health Centre forms the apex of a pyramid, yet till recently even the two doctors working at the primary health centre, had separate spheres of activities, one working for family planning and the other for health. This situation has, however, been somewhat rectified by Government of India letter No. 23-10/69-Ply, dated 5-7-71 and now in most places the two doctors work both for family planning and health services. According to the duties assigned to them the doctors at a PHC are supposed to be in-charge of all health and family planning programme in the area covered by each PHC, but in actual practice they confine themselves almost entirely to running an out-patient clinic either at the PHC headquarters or at sub-centre apart from looking after a limited No. of patients admitted in the PHC. At the District and State headquarter levels too there is a separate staff for family planning, public health and curative health services.

1.2 In West Bengal, the PHC complex developed in a different manner but now the pattern is being gradually changed to the all India one. Though minor modifications in the pattern given above exist in some States, in general the pattern is the same. Not only is there a broad division between the staff engaged in the programmes of health and family planning, but in most of the States there is also a vertical division in the staff engaged in different health programmes, like Malaria, Smallpox, Tuberculosis, Leprosy, Cholera, etc.

1.3 This state of affairs has come into existence because various health programmes and later on family planning programme were launched at different times and each was conceived to run vertically with its own staff. Whereas this has resulted in proliferation of staff, it has also yielded some results. For example, 59% of the country is now in Malaria maintenance phase while a

few years ago malaria claimed millions of lives in this country. The same is true of smallpox. It is true that both malaria and smallpox have not been eradicated, nevertheless, the progress has been encouraging and it is expected that before long these two diseases along with some of the other communicable diseases would be things of the past. Similarly, according to Sample Registration Survey of 1971 there is a definite trend in the lowering of the birth rate which can substantially be attributed to the efforts of the staff recruited for the family planning programme.

1.4 Admittedly there has been success; although of varying degree in each programme. It is, however, disquietening to note a growing demand for increase of staff under each programme. The justification offered for this demand is the need to reduce population/area covered by each worker.

The demand being logical, a question is however, raised in many quarters whether the same objective cannot be achieved by coordinating these programmes and pooling the personnel. Could not such an integration reduce the population/area of each worker, thus making his coverage smaller and consequently more effective? This has resulted in the following recommendation made at the first meeting of the Executive Committee of the Central Family Planning Council held on 20th September, 1972.

"Steps should be taken for the integration of medical, public health and family planning services at the peripheral level. A Committee should be set up to examine and make detailed recommendations on :

- (i) the structure of integrated services at the peripheral and supervisory levels;
- (ii) feasibility of having multi-purpose/bi-purpose workers in the field;
- (iii) training requirements for such workers; and
- (iv) utilization of mobile service units set up under family planning for integrated medical, public health and family planning services operating from tehsil level".

The membership of the Committee recommended was as follows :—

1. Addl. Secretary, Ministry of Health & Family Planning . Chairman
2. Director General, Health Services.
3. Health Secretary, Uttar Pradesh.
4. Health Secretary, Tamil Nadu.
5. Health Secretary, Maharashtra.
6. Deputy Commissioner (P), Department of Family Planning . Member Secretary

It further recommended that the Committee may visit some States to study the actual working at the district and peripheral level and should submit its report within 4 months.

The terms of reference of the Committee were to study and make recommendations on :

- (i) The structure for integrated services at the peripheral and supervisory levels.
- (ii) The feasibility of having multi-purpose/bi-purpose workers in the field.
- (iii) The training requirements for such workers.
- (iv) The utilisation of mobile service units set up under family planning programme for integrated medical, public health and family planning services operating from tehsil/taluq level."

The Committee was asked to visit some States to study the actual working at the district and peripheral levels, and to furnish its report by the end of February, 1973.

1.6 Two further modifications of this order were issued. The first was dated 30th of November, 1972 in which the membership was increased by the addition of Chief (Health) Planning Commission, Director, NIHA, Director, Health Services, Haryana, and Director, Health Services, Gujarat. The Director-General of Health Services was made Vice-Chairman of the Committee. The second modification was dated 23rd February, 1973 in which Deputy Commissioner (T & R) was made the Member-Secretary of the Committee in place of Deputy Commissioner (P). The date of submission of the report was first extended to 30th April, 1973 then to 15th August, 1973 and subsequently to 15th September, 1973 vide Government of India order dated the 22nd May, 1973 and of 25th August, 1973.

1.7 The Planning Commission is also seized of the problem and in the Report of the Steering Group on Health, Family Planning and Nutrition plans for Fifth Five Year Plan, the following observations were made :—

1.37 Integration of Health, Family Planning & Nutrition.— Programmes under Health, Family Planning and Nutrition have been in operation for a long time. These programmes are mostly vertically conceived and are being implemented at the field level by the staff deployed to implement these programmes individually, with little co-ordination or integration of the services. The Steering Group feels that the proper integration of Health, Family Planning and Nutrition programmes is highly desirable as it would be more economical and effective. It may be appreciated that the

multi-purpose health worker (who may be designated health auxiliary for convenience of reference) would be entrusted with the carrying out integrated functions and would have greater rapport with the people in rural areas who would naturally look to him for all their needs in the field of naturally reinforcing components of Health, Family Planning & Nutrition. The Steering Group accepts the general principles enunciated and would suggest that Health auxiliaries may consist of three categories i.e., Basic Health Worker at the lowest level, Health Visitor, Health Inspector at intermediary level and Health Assistants, Health Supervisors at the higher levels. Further, Steering Group would suggest that, with to arriving at an effective pattern of integration of the services from operational and training angle, two Working Groups of experts be appointed immediately to go into the details in respect of : (i) defining functional role of the Health auxiliary in integrated health programmes, conditions of service, salary structure, avenues for promotion, etc., and (ii) defining objectives of training programmes, construction of curriculum in terms of knowledge and skills required to achieve the objectives, identifying training institutions, etc., and give the integration programme a concrete shape. This should be done expeditiously as an advance action in 1973-74. In regard to nutrition schemes, the experience gained by the Department of Community Development, Ministry of Agriculture and Department of Social Welfare, Ministry of Education and Social Welfare, should not be lost in effecting integration of Health, Family Planning and Nutrition. Suitable job charts and training programmes tailored to local needs should be proposed for the personnel of Departments of Health, Family Planning, Social Welfare, Community Development and others engaged in nutrition programmes. Nutrition feeding programme will have to be integrated with other Health and Welfare programmes to form a composite package which will include apart from feeding, minimum health care, immunisation and improvement in environmental sanitation. Integration of personnel from nutrition programme will have to be viewed from this angle.

1.38 The Steering Group lays great importance to the integration of Health, Family Planning and Nutrition programmes and suggests that funds should be provided by the Centre under the Centrally sponsored Sector during the Fifth Five Year Plan for training of : (i) the para-medical workers into multipurpose basic health workers; and (ii) other workers especially engaged in nutrition feeding and nutrition education programmes and who would take up the integration work.

1.39 Integration has three components; (i) integration of buildings, (ii) integration of drugs & equipments, and (iii) integration of personnel.

1.40 Since the Health, Family Planning and Nutrition programmes are proposed to be delivered through health auxiliaries and other workers based at primary health centres and sub-centres, the buildings will serve a common purpose. Under the existing pattern, separate family planning unit buildings have been provided at all the primary health centres and approximately 50% of the sub-centres in each block. Under an integrated arrangement, it is not necessary to have separate buildings or separate funding for the same. It is, therefore, suggested that the buildings for the integrated services should be funded from a single source and separate outlays for buildings under various programmes are not to be called for. Funds to be provided under health and family planning sector for buildings of primary health centres and sub-centres should ordinarily be pooled together and used for making up the deficiencies in the existing building component and for the expansion of the services. The tentative outlay for buildings in question will be, it is understood, Rs. 100 crores (Rs. 60 crores under the minimum health programmes and Rs. 40 crores under the family planning programmes).

1.41 **Drugs and Equipment.**—The drugs and equipment component will be common to all the three services and hence should not be earmarked separately to all the three services for the expansion programme or taking up special programmes under any of the heads. It should be a charge to Central funds to ensure proper implementation of the integrated programmes. On the lines suggested for buildings, the merging of funds under drugs and equipment for all the three services should be carried out and no distinction made at the time of procurement and supplies.

1.8 Programme of the Committee

1. The Committee held its first meeting at Delhi on 15th March, 1973.

It was decided to co-opt Dr. P. Dinesh, Commissioner, Rural Health, as a Member of the Committee.

At this meeting, it was unanimously agreed that the concept of the multi-purpose workers at the periphery was both feasible and desirable. It was left for further discussion whether such multi-purpose workers could be introduced throughout the country or only in those areas where malaria was in maintenance phase and smallpox was under control. Some members felt that if multi-purpose workers were put into operation in areas where malaria was in attack or consolidation phase, it would be difficult to control malaria.

It was decided that the Committee would obtain more information by paying visits to some of the States, talking to the

workers and gathering first-hand knowledge before coming to definite conclusions on its term of reference.

2. The Committee paid three field visits :

- A. To Punjab, Haryana and Himachal Pradesh on 20th to 22nd April, 1973.
- B. To Mysore and Tamil Nadu on 21st to 24th June, 1973.
- C. To Bihar, West Bengal and Orissa on 19th to 22nd July, 1973.

On each visit, the members visited a primary health centre and a sub-centre in each State and interviewed various field workers like an ANM, Family Planning Health Assistant, Basic Health Worker, Vaccinator, etc. The supervisory staff like LHV, Sanitary Inspector, Vaccination Inspector, Health Inspector were also interviewed. While on visit to Mysore & Tamil Nadu, the Committee also met the field workers and Senior Health administrators of Kerala. Opinions were elicited from field workers, their supervisors and health administrators etc., about their reactions to the tasks before the Committee. The doctors working in the primary health centres were also questioned about their views on having multi-purpose workers. An attempt was made to assess the attitude of the PHC doctors vis-a-vis their role as leaders of the health team in the entire area covered by a primary health centre. The response of the village community to the existing health service was also elicited by talking to the villagers, school teachers, panchayat leaders, etc. Discussions were held with the State Health authorities and their views were also sought about the concept of multi-purpose workers and the problems that would have to be overcome to execute the programme. The Committee had also the benefit of discussing the subject with some of the State Health Ministers.

1.9 During the very first visit, it was decided that the Committee should confine itself to the question of multipurpose workers for the rural areas only. This was done for the following reasons :—

- (i) The main area of operation for the multi-purpose workers both in health and the family planning programmes was in the rural sectors.
- (ii) There was a fair degree of uniformity of the staffing pattern of services for rural population in different States.
- (iii) On the other hand, there are multiple authorities in the urban sector like municipalities, large hospitals, medical colleges, etc., which also participate in health and family planning programmes.

For these reasons workers engaged in health and family planning programmes in urban areas have been excluded for the purpose of this Committee's report.

3. The last meeting of the Committee was held on 27th & 28th August, 1973 at Delhi where the draft report was discussed and finalised.

1.10 Acknowledgement :

The Committee wishes to acknowledge its gratitude to the State Health Authorities of Punjab, Haryana, Himachal Pradesh, Mysore, Tamil Nadu, Bihar, West Bengal and Orissa, for the courtesy extended to its members during their visits to the respective States. The Committee wishes to express its sincere thanks for all that these States did to make the field visits really fruitful.

The Committee is also grateful to the officers of the Ministry of Health & Family Planning and the DGHS for their valuable help. The Committee wishes to express its sincere thanks to its Member-Secretary, Dr. D. N. Gupta, who prepared the draft of this report. Thanks are also due to Dr. B. N. Halder, Assistant Commissioner (FP), for assisting the Committee.

EXISTING FACILITIES

1. Staff

2.1 Nomenclature

In general, there exists a certain degree of uniformity in the staffing pattern at the primary health centre level in different States. Minor modifications, however, are in evidence in some States & the gaps between the sanctioned staff and the staff positioned in different States widely vary. Whereas some States have recruited almost the entire sanctioned staff, there are others in which there are wide disparities. This is particularly so in the case of categories like ANMs and LHVs.

According to the figures available, there are 5197 PHCs functioning at present in the country catering to the rural population of 435.8 million (1971 Census). In general, a PHC caters to a population of 80,000 to 1,50,000 or even more. However, in certain parts like the tribal, hilly, and desert areas, a PHC covers a much smaller population. The area covered by a PHC also varies. Usually, there are six to eight sub-centres in a PHC, each sub-centre

catering to a population of 10 to 15 thousand. The staff sanctioned for each PHC is generally as follows :—

1. Doctors	2
2. Block Extension Educator	1
3. Family Planning Health Assistants	4
4. Vaccinators	3 to 4 (one for 30,000 population)
5. Basic Health Workers/Malaria Surveillance Workers	8 (one for 10,000 population)
6. Health Inspectors/Malaria Inspectors	2
7. ANMs	10
8. Lady Health Visitors	2
9. Sanitary Inspector	1

Some States have introduced functionaries with different designations like Junior Health Inspectors, Health Inspectors, Senior Sanitary Inspectors, Health Assistants, Enumerators, etc.

This multiplicity of names, varying job responsibilities and different categories of functionaries have come about because of historical reasons and the provision of promotional avenues to the staff recruited.

The existing staff position as supplied by the different States is given in Annexure V.

2.2. Job responsibilities

Almost all the States have printed manuals of the job responsibilities of different functionaries. A few representative samples are given in Annexure VI.

2.3. Educational qualifications

There are variations in the educational qualifications of different functionaries in different States and also within each State. Generally the old entrants were non-matriculates who were recruited and then given in-service training. The subsequent recruits have been mostly Matriculates who have either had pre-service training of variable duration or inservice training.

2.4. Pay scales

There are fairly wide variations in the pay-scales existing in different States. For example the pay-scale of a Vaccinator in Mysore is Rs. 80-145, in Punjab it is Rs. 100-160, and in Tamil Nadu it is a fixed pay of Rs. 120/- with Dearness pay of Rs. 118/- (a total of Rs. 238/-). Similarly, in the case of ANMs, Tamil Nadu's pay scale is Rs. 170-225, in Mysore it is Rs. 90-200, in Punjab it is Rs. 110-200 and in West Bengal it is Rs. 180-350.

2.5. Training facilities

The training facilities under Family Planning Programme are well organised in established training centres spread all over the country. These centres are being run with 100% Central assistance. The training facilities under Health programmes are available in the State run Sanitary Inspector schools while advantage is also being taken of the training facilities at the District Hospitals and in some cases, Medical College Hospitals. The following recognised training programmes/centres are available in the country.

2.5.1 Under Family Planning Programme

(a) Central Institutes (Five)

1. National Institute of Family Planning, New Delhi, (Under the Department of Family Planning, Government of India). This Institute runs training programmes for the trainers. An Annual Calendar of activities is prepared by the Institute and approved by the Department of Family Planning.

2. Central Health Education Bureau, New Delhi (Under the control of Director-General of Health Services).

This Institute runs training programmes for both health and family planning programmes. For the latter, it receives aid from the Department of Family Planning. Under the Family Planning Programme, the training programmes are for the trainers. It also runs a Diploma Course in Health Education recognised by the University of Delhi. It prepares an Annual Calendar of its activities which is approved by the Director General of Health Services for health training programmes and by the Department of Family Planning training programmes.

3. All India Institute of Hygiene and Public Health, Calcutta (under the control of Ministry of Health and Family Planning).

This Institute runs training programmes both for Health and Family Planning. For the latter, it receives aid from the Department of Family Planning. Family Planning training programmes are run for the trainers, mostly District Family Planning Officers. In the field of health, it has instituted Diploma Courses in Health Education, Public Health and Nutrition.

4. Family Planning Training & Research Centre, Bombay (under the Department of Family Planning, Government of India).

It conducts courses for the training of trainers in family planning like District Extension Educators. Recently, it has run a long course of three months for Block Extension Educators.

5. Gandhigram Institute of Rural Health & Family Planning (run by a voluntary agency and aided by the Department of Family Planning).

This Institute runs training courses for trainers like District Extension Educators and has conducted long courses for Block Extension Educators. This Institute also gives a Diploma in Health Education.

(b) *Regional Family Planning Training Centres.*

These centres provide orientation and short-term training to PHC doctors, Block Extension Educators, ANMs, FPHAs and to other personnel engaged in family planning programmes. 46 such centres have been sanctioned and 44 are in existence in different parts of the country. Each has a staff of 26, consisting of 1 Principal, 1 Medical Lecturer-cum-Demonstrator, 1 Health Education Instructor, 1 Social Science Instructor, 1 Statistician, 1 P.H. Nurse Instructor, and 4 Health Education Extension Officers plus a Projectionist, a Draughtsman and some office staff.

(c) *16 Family Planning Field Units.*

These are peripatetic training teams which provide on-the-job orientation training in family planning to ANMs, Family Planning Health Assistants, school teachers and others engaged in family planning programmes. Each has the following staff :

Family Planning Officer	1
Asstt. Surgeon	1
Health Educator, Gazetted	1
Junior Health Educator	1
Social Workers	1
Projectionist	1
Mechanic	1
Driver	1
Upper Division Clerk	1
Lower Division Clerk	1
Peon	1
Chowkidar	1
Sweeper (Part-time)	1

2.5.2 Under Health

1. *Sanitary Inspector Training Centres.*—There are about 40 Sanitary Inspector Training centres run mostly by State Governments and a few by private agencies. The duration of the course used to vary from 5 months to 1 year, but has since been fixed at one year by the Government of India.

2. *Rural Training Centres*.—One at Najafgarh and the other at Singur under Government of India and sixteen others under different States.

3. As mentioned above, advantage is also taken of district hospitals and medical college hospitals for providing short-term training to health workers like Vaccinators, Malaria workers, etc.

2.5.3 ANMs and LHVs receive pre-service training in recognized ANM and LHV schools. There are 320 ANM schools and 23 LHV schools in different parts of the country.

- (a) Majority of ANM schools (223) are run by State Governments and of these 60 are Centrally aided by Department of Family Planning. The remaining 97 are run by voluntary agencies and 62 of these are aided by the Department of Family Planning. Though the admission capacity of all these schools is 8169 per year, yet for want of adequate hostel facilities the number admitted each year is lower, viz., about 6500. The course is of two years duration and the minimum educational qualifications for entry is VII class pass. Of late, a large number of girls who have passed Matriculation have been coming up for admission.
- (b) Lady Health Visitors' Course is of 2½ years duration and Matriculation is the minimum educational qualification for admission. The annual in-take of all the schools is 1043, but the number admitted each year is about 800 only.
- (c) Public Health Nursing: Facilities for this course are available at Nursing Colleges and at some of the Nursing Schools.

2.6 Mobile Units

Mobile Sterilisation Units have been in position since August, 1964. In 1966 the Mukherjee Committee recommended the introduction of IUD units to provide a greater coverage for this programme. The Committee, after weighing the pros and cons of attaching IUD units either to P.H.C. or to District Bureau, was in favour of the latter alternative. It also recommended that the staff of Primary Health Centre will be interchangeable with the staff of the mobile units. The Government accepted the recommendations of this Committee and sanctioned establishment of one mobile sterilisation unit and one mobile IUD unit for a population of 5 to 7.5 lakhs in each district. In order to make the visits of these units more profitable for rural areas, it was decided in September, 1967 that each of the units will carry general medicine for emergency medical relief.

Since the performance under IUD programme fell and these units were unable to achieve targets set for them it was decided that both units would provide all the services and will be termed as mobile service units.

For each intensive district, of which there are 17, it was decided in 1969 that in addition to the number of mobile units on population basis there should be three more multipurpose mobile units for each district.

A review of the performance of the units in February, 1971 showed that the average performance per unit per month was on the low side. It was, therefore, decided in October 1971, that such mobile service units as were not being put to optimum use and where service facilities were available at other places like hospitals, urban centres and primary health centres, these be closed and spare vehicles utilised elsewhere.

According to the information available, there were 399 sterilisation units and 456 IUD units in March, 1973 throughout the country. The State-wise distribution of these units is given in Annexure VII.

Each sterilisation unit has a staff consisting of Medical Officer and an operation theatre nurse and an attendant. Each IUD unit has for its staff, a lady Assistant Surgeon, an ANM and an attendant.

The performance of these units has been further examined in July, 1973 and it has been decided to retain only one mobile service unit in each district. The pattern of mobile service units in intensive districts would, however, continue.

FINDINGS OF THE COMMITTEE

3.1 Background

Many health administrators have felt that the present staff of the primary health centres and sub-centres cannot adequately deal with the health and family planning requirements of the population involved. The population given to each worker is too large to be adequately covered and frequently visited. For example, an ANM has a population of 10 to 15 thousand in which she is expected to provide maternity services along with ante-natal and post-natal care, child health care and also do family planning extension work. This population may be concentrated in a radius of 2 to 3 miles from her headquarters or scattered over a larger area of 10 to 15 miles radius or even more. The same is the case with the malaria workers and the position is much worse for vaccinators.

3.2 While ascertaining the views of the community leaders about the existing health and family planning services, it was clearly brought out that the people are not happy with so many workers

coming to their homes and making enquiries for individual programmes. The community leaders were of the opinion that a single worker delivering both health and family planning services would be more welcome.

It was also mentioned that the present health and family planning workers were not able to provide remedies even for simple ailments like head-aches, cuts and burns and the rural community had to take the help of either the village quack or trudge long distances to get relief at the PHC. When the ANMs and the Malaria and Smallpox workers were asked about it, they too endorsed these views and further added that their acceptability to the community would also be increased if they were in a position to provide a rudimentary treatment for minor ailments.

From time to time, studies have been undertaken to ascertain if by increasing the number of health/family planning workers their efficiency would increase. In Naurangwal (Punjab) the number of ANMs per block was increased to find out the optimum population which could be effectively covered by each. The Institute of Rural Health and Family Planning at Gandhigram compared the performance in two blocks, keeping 5,000 population per ANM in one block and 10,000 in the other.

Limited experiments on similar lines for male workers have also been tried in Maharashtra.

In Wardha an integrated scheme of malaria eradication and smallpox programmes was started in 1966 with the final aim of having a basic health worker for all health programmes. More recently this experiment has been introduced in Kolhapur district also by an integrated malaria and smallpox project in one section of each of the 52 sectors in the district. This integrated project covers 1% of the rural and urban population of the district.

Since the above mentioned experimental projects have been few and far between and covered only a small number of workers, an apprehension has been expressed whether the project of the multi-purpose workers would at all be feasible. During the visits of the Committee, similar fears were expressed by some of the State Health authorities. To-date, we have only one experimental study conducted by NIHAEL (a WHO/UNICEF assisted research project), in Kiloi block of Rohtak district, Haryana State, where male workers engaged under malaria, smallpox and family planning programme have been grouped together; given a short orientation training of one week and put into the field as multi-purpose workers. This project has been in operation for just over a year. The performance of workers in various health & family planning programmes prior to the introduction of multi-purpose workers' scheme vis-a-vis their performance as multi-purpose workers is given

in Annexure VIII. It shows that there is a definite improvement in the malaria programme (both active surveillance and passive surveillance) by way of increased number of slides collected and the number of positive cases detected; increased number of both primary vaccinations and revaccinations and in the family planning programme. The results so far obtained are extremely encouraging.

3.3 The Maharashtra Government has also instituted a project similar to the NIHAEE Project at Miraj Medical Centre. In this project they intend giving intensive training of about 10 weeks to the future multi-purpose workers. Their supervisors will go through the same programme plus two weeks more for supervisory duties. It is proposed that the ANMs should also undergo a short training to acquaint themselves with the activities of the multi-purpose workers. The sponsoring institute of this project is the Miraj Medical Centre.

3.4 Findings

3.4.1 Feasibility

In the light of experience obtained in the various studies and consequent upon the discussions with the State Health authorities and District Medical Officers of Health; the views expressed by the peripheral workers themselves and the reactions of the community, the members of the Committee felt convinced that the concept of having multi-purpose workers was both desirable and feasible. The field workers were quite enthusiastic about this concept and they felt that it would enhance their acceptance and effectiveness. The Committee felt that the results of the Kiloi project have been sufficiently encouraging to dispel any apprehensions in this matter.

3.4.2 Number of workers involved

The number of male workers engaged in malaria, smallpox and trachoma and family planning programmes is sufficiently large and after integration each male worker will have 6 to 7 thousand population to cater to. The position regarding the ANMs is, however, not satisfactory. Their number is only about half that of the male workers. It was ascertained from some of the male workers engaged in malaria, smallpox and family planning programmes, that it would not be possible for them to undertake maternity work nor would they be acceptable to the community in this role. On the other hand some of the ANMs felt confident that they could do malaria and smallpox work in addition to their own.

3.4.3 Phasing

On the question of phasing of the programme, some members of the Committee felt that multi-purpose workers should be

introduced only in those areas where malaria was in the maintenance phase and smallpox has been controlled. Others were of the opinion that the programme could be introduced all over, irrespective of the stage of control of these diseases. After mature consideration, the Committee feels that since the number of workers to be trained is so very large, a practical way out would be as follows :—

To begin with, the training of the workers as multi-purpose functionaries could be started in those areas where smallpox is controlled and malaria is in the maintenance phase. Since such areas constitute 59% of the country, the number of workers to be trained, though still large, would be more manageable. After a few years when these workers have been trained and, other areas have been brought into maintenance phase, the programme could be extended to cover the entire country.

It was felt that to start with, workers of only four programmes i.e., malaria, smallpox, trachoma and family planning including M.C.H. be included in the multi-purpose concept. Since filaria, cholera and leprosy are of regional or zonal importance and since the number of workers engaged under these programmes is comparatively small, these programmes may continue to run as vertical programmes for the time being and the workers in these programmes could continue as uni-purpose workers. Trachoma is also zonal in distribution, but since the number of workers involved in this programme is small and their job is very specific, it was decided that these workers may be included from the start. It was also felt that the same applied to B.C.G. workers. This, however, should only be a temporary phase and eventually, the Committee felt that all the workers should be brought under this programme.

3-4-4 Supervisors

Time and again it was brought home to the Committee that lack of proper supervision was an important factor in the unsatisfactory functioning of the peripheral workers. The Committee, therefore, is strongly of the opinion that equal attention needs to be paid both to the multi-purpose workers and their supervisors.

It was felt that in an ideal situation, there should be one female worker (ANM) for a population of 3000 to 3500 or in an area of not more than 5 kilometres radius from her place of work. A male worker could also effectively cater to the same population. Taking into consideration the number of available workers both male and female, it was felt that a male worker according to the existing number would have to cover a population of 6 to 7 thousand, although this coverage will not be totally effective. An

ANM on the other hand will have to work for a population of about 10 to 15 thousand. Till such time as the number of ANMs can be increased, it was considered that the population for an ANM may be divided into two zones, one intensive zone of 3 to 4 thousand and within a radius of 5 k.m. and the other, a 'twilight' zone consisting of the remaining population. In the intensive zone she should be fully responsible for the MCH and family planning services while in the 'twilight' zone her service would be available only on request.

3.4.5 New designations

The question of nomenclature for the multi-purpose workers was also discussed. Some members felt that new nomenclature might create difficulties while others felt that with new job responsibilities a new designation would be more useful. The consensus was in favour of the latter and the Committee suggests the new designations for multi-purpose workers as Health Worker (male) and Health Worker (female). The latter would be the present day ANM. The new designations proposed for the supervisors are Health Supervisor (male) and Health Supervisor (female) respectively.

In each sub-centre, there will be a team of two workers, one male and one female. For effective supervision, it was felt that there will have to be a separate male and a separate female supervisor.

3.4.6 The Committee felt that when adequate facilities of men, material and money are available, the No. of PHCs should be increased. It is felt that for a proper coverage there should be a PHC for 50,000 population. Each PHC would have at least two doctors, one of them should be a female.

- (a) The population in each PHC would be divided into 16 sub-centres, each having a population of about 3100.
- (b) Each Sub-centre would have a team of one female junior community health worker.

3.5 The Committee recommends that for real effectiveness and enhanced acceptability in the community each multi-purpose worker (male and female) should be provided with a few simple medicines for minor ailments costing up to Rs. 2000/- per annum per sub-centre. These medicines should be replenished at regular intervals. The workers must be taught when to refer cases beyond their competence to the PHC doctor.

3.6 The Committee was convinced that if integration is to succeed it should not only be confined to sub-centre, sector or PHC, but the concept must also extend to the Tehsil and District levels

and also to the State headquarters. For the multipurpose and integrated outlook to develop fully in the district and at lower levels, it is necessary that the district should be under the over-all charge of the Chief Medical Officer who will be fully responsible for the entire medical, health, family planning and nutrition programme in that district. He will be assisted by Deputy Chief Medical Officers, who will assist him in the execution of all programmes listed above. These Deputy Chiefs may also be entrusted with the work of coordination of specific programmes but they should be given peripheral responsibility in respect of field implementation of all the programmes on an area basis.

It will be necessary to give the Chief Medical Officer technical and administrative assistance. Such assistance is available from the existing staff. The Administrative Officer and the District Mass Information and Education Officer and the District Extension Educators could be attached directly to the C.M.O. so that the Administrative Officer provides him assistance in administration, establishment and organisation at the headquarters and the DMETO and DEE become Public Relations Officers for all programmes.

At the State headquarters level the total authority for medical, health, family planning and nutrition, would rest with the Director of Medical and Health Services. He would be assisted by Addl./Joint/Deputy Directors.

JOB FUNCTIONS OF THE MULTI-PURPOSE WORKERS

Health Workers (Female)

4.1 According to the information made available to the Committee, there are 40,225 ANMs employed in the country. They include all those who are working in sub-centres, PHCs, urban centres, and in district and other hospitals. In general, 2 ANMs are stationed at each PHC, one provides nursing care to the in-patients of PHC and the other looks after the area in the immediate neighbourhood of the PHC. Thus the number of ANMs working in the sub-centres only would be about 20 to 25 thousand.

As mentioned earlier, there is a far greater shortage of ANMs than of their male counter-parts. The Committee felt that a concerted effort should be made to increase the number of ANMs even for the minimum needs programme of health and family planning. Since the existing training programme for an ANM is of two years duration, it will take a fairly long time to make up the shortage. A partial solution of this problem could be to post all ANMs to sub-centres and take them out of all other places. For the nursing care of the in-patients of PHCs and in district and other hospitals, her place could with advantage be taken by trained nurse-midwives. The latter, the Committee was informed, are available and will be

more suited for the nursing care of the in-patients and would also relieve ANMs for the community work for which they are primarily trained.

4.1.1 Job responsibilities recommended

She should provide 100% ante-natal and post-natal coverage to a population of 3 to 4 thousand and about 50% coverage for intra-natal care. For the additional population in the "twilight" zone her services should be available on request only.

The following will be her job responsibilities :

(i) Ante-natal care :

1. Registration of pregnant women from three months pregnancy onwards.
2. Looking after pregnant women throughout the period of pregnancy.
3. Urine examination of pregnant women wherever possible.
4. Distribution of iron and folic acid tablets to ante-natal and nursing mothers.
5. Referral of cases of abnormal pregnancy.
6. Immunisation of expectant mothers with Tetanus Toxoid.

(ii) Intra-natal care

1. As stated above she will conduct about 50% of deliveries in her intensive area and whenever called in the 'twilight' area.
2. To supervise deliveries conducted by dais whenever called in.
3. Referral of cases of difficult labour.

(iii) Post-natal and infant care

1. She will pay at least three post-delivery visits for each delivery case and render advice regarding feeding of the new born.
2. She will do primary small-pox vaccination and BCG vaccination to all the new born infants.

(iv) Family Planning :

1. Maintenance of a copy of eligible couple registers.
2. Spreading the message of family planning to the women in her area and distribute conventional contraceptives amongst them.

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3. Follow-up of IUD and sterilisation cases.

(v) Nutrition :

1. She will give advice on nutrition to pregnant women, nursing mothers and infants, in arms (0-1 year age), but she will not be responsible for storage, preparation and distribution of food.
2. As stated above, distribution of iron and folic acid tablets to pregnant and nursing mothers. If required, she will distribute Vitamin 'A' to children of 0 to 1 year age.

(vi) Training :

She will help in the training programmes of Dais.

(vii) Health education :

She will take part in health education programme during home visits and also when mothers come to the centre.

(viii) Health Care :

1. She will render health care for minor ailments and provide first aid in case of emergencies.
2. She will refer cases beyond her competence to the P.H.C. or to the nearest dispensary.

4.2 Health Worker (Male)

1. According to the figures available, the following are the number of different categories of workers which can be made male multi-purpose workers :—

1. Basic health workers	22,000
2. Malaria surveillance workers	21,190
3. Vaccinators	20,314
4. Family Planning Health Assistants	12,500
5. Health education assistants (Trachoma)	374
TOTAL	76,378

As mentioned earlier, workers engaged in cholera and leprosy control and for BCG vaccination may be allowed to continue as uni-purpose workers for some time. Their number is as follows :—

1. BCG technicians	1,752
2. Cholera workers	1,461
3. Para-medical Assistants (Leprosy)	1,448
TOTAL	4,661

The Mealth Worker (male) will require training before he can be put on the job. Whereas his female counter-part has had a pre-service training of 2 years, the existing workers in health and family planning programmes who will be converted into multi-purpose workers have had training in only one field of activity and that too for a comparatively short duration. The duration of the training and the place where it is to be imparted are discussed in another chapter.

This worker, after receiving training in all the programmes, will be able to look after a population of 6 to 7 thousand at present. He will work in collaboration with his female counterpart, i.e., Health Worker (female). Both of them can stay in the same sub-centre village. The Committee feels that if these workers function as a team, their effectiveness will be the minimum.

4.2.1 During visits to the sub-centre, it was brought to the notice of the Committee that male workers engaged in health and family planning programmes do not have adequate opportunities to come in contact with the male members of the rural community. This is because the majority of the people are working in the field or have to go out to work during day time and hence are not available to the male workers during their home visits. The question of change of working hours of these male workers was therefore discussed. A suggestion was made that these workers should have different working hours, starting later in the day and continuing till late evening. During discussions, however, it was brought out that by adopting this method a number of administrative problems would arise and at the same time the team work between the male and female field workers would be disturbed. It was, therefore, decided that the male workers may have the usual working hours but they should not confine their attention only to the home visits but should contact the male members of the rural community wherever they can find them.

4.2.2 Job responsibilities recommended :

(i) *Health Programme*

1. Will help in the control of communicable diseases including malaria. For this he will pay regular visits to each house-hold once every 2-3 weeks and contact all cases of fever. He will report immediately any outbreak of infectious diseases such as cholera, typhoid, polio, small-pox, etc.
2. Immunisation of children of over one year for small-pox (revaccination), diphtheria, tetanus and whooping cough. He will also revaccinate all adults above 15 years of age after every three years.

3. He will assist the supervisor in the school immunisation programme.

(ii) *Family Planning*

1. He will be responsible for the preparation, up-dating and maintenance of eligible couple registers. He will also supply a copy of these to the Health Workers (Female).
2. He will distribute Nirodh to the population in his area.
3. He will spread the message of family planning amongst males of his area and follow-up the acceptors.

(iii) *Health Education*

1. He will help in the health education programme during his visits to the homes and at other areas of contact with the males of the population.
2. He will be responsible for maintenance of birth and death registers and other vital statistics.
3. He will identify community leaders and with their help educate and involve the community in health, family planning & nutrition programmes.

(iv) *Nutrition*

He will help in the nutrition programme of the pre-school going children by way of spotting cases of malnutrition and refer them to Balvadis or PHC for necessary nutrition supplement or treatment. He will, however, not be responsible for maintenance of stock and preparation and distribution of food.

(v) *Health Care*

1. He will provide medical aid for minor ailments and render first aid.
2. He will refer cases beyond his competence to the PHC or to the nearest dispensary.

JOB FUNCTIONS OF SUPERVISORS

Health Supervisor (female)

5.1 The supervision of ANMs, in most places, is done by LHVs. This functionary is a Matriculate who has had 2½ years pre-service training. According to the course content of her curriculum, this training is community oriented. For the last decade or so, the Nursing Council of India has not been in favour of continuing the LHV course. Some of the State Nursing Councils have

accepted this suggestion and have discontinued the LHV training. Instead they have instituted one to three months community health orientation course for nurse midwives who have undergone 3½ years course and put them as supervisors of ANMs. Maharashtra and West Bengal are two such States. Majority of the other States have, however, continued the LHV training in spite of the Nursing Council's objection.

In all, there are at present 23 LHV schools with an annual admission capacity of 1043. Of these, eight schools are Centrally aided and 15 are State-run.

The members of the Committee had opportunities to talk to LHVs, public health nurses and nurse-midwives who had received additional community health training and were working as supervisors of ANMs. The general impression gathered was that the present day LHV was not proving an effective supervisor. This could be partly attributed to the fact that they are much fewer than the number required and hence have proportionately larger area to cover. Secondly, they are unable to provide technical help and guidance to the ANMs in maternity work because after training they get out of touch with this work.

The experience of Maharashtra State Health Authorities, on the other hand, is that nurse-midwives with community health training, when put as supervisors of ANMs are not keen to stay on, but want to go back to the hospitals as staff nurses. This is understandable since it is common experience that a person wishes to return to the environment in which he/she was trained.

5.1.1 The general consensus in the Committee was that for the effective supervision of the work of Health Worker (female), a functionary was needed who is primarily trained in community health. She should have maternity practice as a major component of her training and should continue to practice in this field in order to render expert advice and help. Her training should be more community oriented than hospital biased. It is, therefore, apparent that LHV training needs modifications.

5.1.2 The total number of LHVs and public health nurses employed at present is 7462. This no. includes those who are attached to primary health centres and others posted in urban centres at the district and State headquarters as well as district public health nurses. According to the existing pattern, only 2 LHVs/. PHNs are sanctioned for each PHC. Although both are expected to go into the periphery, they have duties at the PHC itself to attend to.

From the total figures of ANMs and LHVs available, it is obvious that if all ANMs are to be put in sub-centres and all LHVs.

are to work only as their supervisors, the ratio will work out at one LHV for six ANMs. The Committee is of the view that effective supervision can only be exercised if one LHV supervises the work of not more than 4 ANMs. The need for having more LHVs is therefore obvious.

5.2. Job responsibilities recommended :

1. She will reinforce the skills in Health Worker (female) in MCH, Family Planning and nutrition components of her pre-service training.
2. She will supervise and guide the H.W. (female) in giving MCH and Family Planning services to the public in her sector.
3. She will observe and supervise the work of H.W. (female) trained dais. For this purpose, it is necessary for her to observe them conduct one or two domiciliary deliveries.
4. She will help them improve technical and human relationship skills.
5. She will respond to urgent calls from the H.W. (female) and trained dais and render the required help.
6. In abnormal cases she will arrange for transport to take the expectant mothers to the PHC or the nearest hospital.
7. She will visit at least once a week, on fixed days, each sub-centre in her jurisdiction. During these visits she will conduct ante-natal and well-baby clinics. During her visits to the sub-centre she will carry out home visits and during these visits in addition to giving advice about maternity and child health, she will demonstrate simple procedures to relieve conditions such as sore eyes, scabies and common boils, etc.
8. She will arrange to give group talks to expectant mothers laying stress on personal hygiene, nutrition education and environmental sanitation.
9. She will contact the mothers during her clinic visits and distribute educational materials to them.
10. She will also help in educating the women in control of communicable diseases.
11. She will hold staff conferences once a month with the H.W. (female) and trained dais working within her area.
12. She will give an evaluation report of the work done in the field of maternal and child health in her sector.

13. She will be responsible for maintenance of records, preparation and submission of reports and returns. A separate record is to be maintained for domiciliary confinements.
14. She will undertake the training of dais with the help of H.W. (female).
15. She will personally motivate resistant cases for family planning.

5.3 Health Supervisor (Male)

5.3.1 In most of the States the present supervisor is one who worked in a particular programme for a number of years and was promoted to the higher grade. In some of the eastern States like Orissa, Bihar, and West Bengal, however, there is another class of worker—the health assistant. These persons are matriculates who were given two years training in medical colleges. They are bracketed with sanitary inspectors, malaria inspectors, etc., as far as their salary is concerned, but by virtue of their training, they are comparable to 'Bare Foot Doctors' of China. This training programme was however given up some years ago and the number of health assistants is therefore gradually coming down.

5.3.2 According to the figures available in the Directorate General of Health Services, following is the number and categories of workers who, after suitable training, can perform supervisory tasks for the male health workers.

(i) Health Inspectors/Sanitary Inspectors	3200
(ii) Malaria Surveillance Inspectors	5207
(iii) Vaccinator/Supervisors	4649
TOTAL	41856

Of these, the number available for the rural areas will be about half, i.e., 22000.

As the number of male health workers available would be a little over 76,000, and if, the work of 4 peripheral workers can be supervised by one supervisor, the total number of male supervisors required would be about 19,000 only. This means that there is a surplus of about 3,000 of male supervisory workers.

The number of male health supervisors being over three times the number of female supervisory workers, there is an urgent need to concentrate on increasing the number of female supervisory workers during the Fifth Five Year Plan period. To get round this problem of mal-distribution of numbers, the Committee considered the possibility of giving the task of supervision of female multi-purpose workers to male supervisors. However, the existing

functionaries when asked about it were reluctant and lacked confidence. The Committee also feels that the work of the female multi-purpose workers cannot be effectively supervised by the male supervisors.

According to the existing number of supervisors, there will be one male supervisor over three to four male health workers as contrasted to one female supervisor for six female workers for the time being.

5.4 In addition to the categories mentioned above in some States there are supervisors in still higher grades. These are senior sanitary inspectors, senior malaria and health inspectors and senior vaccination inspectors. The Committee considered this problem and suggests that since this is not an all-India pattern, and the number involved is not very large, the only solution is to abolish such posts for future. During the interim period, one senior inspector of health, malaria or smallpox can be posted at the PHC.

5.5 The position of the Block Extension Educator is peculiar. He is generally a graduate in social sciences who has had a short orientation training in family planning work but has no knowledge of medical or health programmes. In some States, BEEs are matriculates. His scale of pay is the highest of all the workers engaged in health and family planning programmes. At present, he is in charge of extension education for the entire block and he stays at the PHC headquarters. Whereas his higher academic qualification is an asset, the lack of training and knowledge of health and medical programmes is his handicap.

The Committee was therefore faced with the problem of fitting this functionary in the proposed set up. It considered placing him in the category of male Health Supervisor along with Sanitary Inspectors/Health Inspectors but the KILOI experiment was discouraging. According to the report, he proved to be recalcitrant to an integrated approach. He was apprehensive that if converted into the role of a health supervisor his area of influence would be reduced resulting in loss of prestige. Moreover, if he is to be made a male health supervisor his training would be longer and more intensive as compared to the health inspector/sanitary inspector, etc.

The Committee therefore felt that as an interim measure, the BEE should be posted at the PHC and should serve as an assistant to the Medical Officers. He would render the medical officers assistance in arranging meetings and camps and all public relations work. He would also help the PHC doctors in office work and record keeping. It is suggested that his designation be changed to "Block Health Assistant".

He would, however, not be in a position to exercise any technical supervision over health supervisors.

It was felt that in all probability such a change may be needed in future. Their promotion to the post of District Health Assistants could be considered where they would work as Assistants to the C.M.Os for extension work.

Training to be imparted to the so-far-single-purpose senior community health workers is of crucial importance. This aspect is discussed in a subsequent chapter.

5.6. Job Responsibilities Recommended for Health Supervisors (Male)

1. To supervise the work of male health workers and to provide adequate guidance to them by making frequent visits to each worker in his jurisdiction.
2. To arrange small group meetings with the help of community leaders for spreading the message of family planning to the males and answering any of their queries on the subject.
3. To check vaccination of all school-going children.
4. To check and supervise the malaria maintenance work and the small-pox vaccination work of the male health workers.
5. To supervise the records maintained by the male health workers.
6. To keep a close watch on the sudden outbreak of epidemics like cholera, small-pox, etc.
7. To treat all cases whose blood smears are positive for malaria.
8. To supervise spraying of insecticides.
9. To supervise the work of male health workers regarding environmental sanitation, disinfection of wells, etc.
10. To periodically check the registers and records maintained by male health workers by actual physical verification.
11. To be responsible to the primary health centre doctors for delivery of health, family planning and nutrition services to the community.
12. To maintain adequate supplies of Nirodh and other contraceptives for distribution.

INTEGRATION AT DIFFERENT LEVELS

6.1 The organisation of the present day health and family planning and nutrition services in any State bears a close resemblance to an hour glass. The constriction in the middle can be compared to a PHC with widened areas above and below. Above the PHC there is a broad division of health services into preventive and curative medicines and family planning. Even in preventive medicine there are individual officers responsible for different programmes like malaria, small-pox, cholera, tuberculosis, etc. Below the PHC level there are again different workers engaged individual and separate programmes like malaria, small-pox, leprosy, cholera, family planning, etc.

6.2 The Committee feels convinced that having multi-purpose workers at the periphery and their immediate supervisors at the sectoral level, without integration of the entire range of curative and preventive health services and family planning, from the State headquarters down-wards, would be only a partial solution of the complex problem.

6.3 A strong plea was made to the Committee that preventive and promotive health activities could only be built around a pillar of curative medicine. Any worker engaged in health and family planning activities must be able to provide curative measures for simple ailments if he/she is to be effective and acceptable to the community. The same is applicable to the doctors. Only that doctor will prove effective for motivating people for family planning or accepting inoculations who can treat them for their ailments.

6.4 Present scene

6.4.1. PHC level.

1. The PHC doctor to-day has a large number of responsibilities, at least on paper. In most of the cases he is a fresh graduate and has not been given any training to discharge these responsibilities during his under-graduate days. He, therefore, finds it convenient to confine himself to doing the out-patient clinics at the PHC or at the sub-centres during his visits. A small portion of his time is also spent in the care of in-patients at the PHC. In the Kiloi study, it was brought out that about 60% of the time of the PHC doctor is unaccounted for. This is obviously a serious situation.

2. In addition to the PHC, there are a variety of dispensaries in many blocks. Some of the dispensaries are run by local bodies, voluntary agencies and some by Government. These dispensaries are either manned by Allopathic doctors or by Ayurvedic, Unani

or Homoeopathic practitioners. There is no inter-link between these dispensaries and the PHC.

3. The distance between a PHC and the next larger hospital where greater expertise is available, varies from 5 to 100 miles. In general, there are no graded hospitals in-between the medical college hospitals where specialists and wide array of investigative services are available and the PHC where neither is available. There are, however, some well equipped District Hospitals where adequate facilities for investigations and treatment are available.

4. The administrative hierarchy, too, is both diffuse and confusing. For the preventive services the PHC doctor is responsible to the district health officer and for the curative medicine he has to make referrals to the district hospital. In some States, family planning and health services are combined in one functionary, i.e. the district medical officer of health and family planning while in others, two separate functionaries exist.

6.4.1.1 The doctors of PHC during their visits to sub-centres will not only render health care to the population but will also check the work of the health workers and their supervisors.

6.4.1.2 All the dispensaries in the jurisdiction of a primary health centre should be linked with the PHC and each dispensary doctor should render referral services to the cases referred by the health workers.

6.4.1.3 The doctors at the PHC should divide the population on a geographical basis for their field visits. While one doctor attends to the out-patients and in-patients at the PHC, the other doctor should go out in field visits and extend integrated health, family planning and nutrition services to the population. Thus each doctor will be at the PHC for three days and will be away on field visits for the other three days of the week.

Wherever there is one lady doctor at the PHC, she should render specialist services for maternity and child health to the entire PHC population.

6.4.2. Taluq/Tehsil level

Wherever tehsil/taluq hospitals are in existence specialist services and investigative facilities are, in general, poor. Wherever, such hospitals do exist medical officers working in these hospitals are responsible for the health care of only the in-patients of the hospital. They are not responsible for the public health activities of that area.

6.4.3. District level :

At the district level, there is a Civil Surgeon who is usually incharge of the district hospital. In many district hospitals there are junior specialists in surgery, medicine and obst. and gynec. X-ray and laboratory facilities are available to a limited degree. In addition to the Civil Surgeon, there are two, three or more district medical officers of health. In some States, district medical officers have combined responsibilities for health and family planning while in others the two are separate. In most of the States, the Chief Medical Officer has an overall charge of both the civil hospital and the public health services of the district. In general the promotional avenues tend to gravitate towards the Civil Surgeon and not from the Civil Surgeon to medical officers of the health and family planning.

6.4.4. State Headquarters :

In many States there is only one man at the top, the Director of Health Services, for all the health and family planning programmes including education and training. He is assisted by a number of Deputy Directors and Assistant Directors. In other States, medical education is taken away from the purview of the Director of Health Services and a separate Directorate has been set up to look after medical education. Usually an officer of the rank of an Assistant Director posted at the State headquarters looks after the nursing and MCH services. There is hardly a State in which training of the para-medical staff is entrusted to a single officer in the Directorate.

6.4.5. Medical Colleges :

In the vast sea of health and family planning services of the States, Medical Colleges and the attached hospitals are islands in themselves. Their responsibility starts and ends with undergraduate and post-graduate medical education and rendering of medical care to those who seek help either as out-patients or are admitted into the wards. Their specialist services and the sophisticated investigative techniques are hardly ever extended to the community at large. Whatever liaison exists between the staff of the medical colleges and the doctors working in the district hospitals or in PHCs, is on personal basis.

Although each medical college is supposed to have, and many do have, a rural and urban field practice area, it is more of a show-piece and hardly ever caters to the health needs of the community within this area.

6.5. Comments :

With such a diverse, diffuse and at times conflicting array of medical facilities available in the country, it is not surprising that there is a constant cry of neglect and of inadequacies particularly for the under-privileged sections of the society which constitute the vast majority. Even though we may have a poorer doctors-population ratio, as compared to the developed societies, it is an inescapable fact that a proper harnessing of the available resources and a reorganisation of the entire system can go a long way in solving the health problems of the country.

If proper bridges could be built between the medical college hospitals on one side and the primary health centres at the other, with taluq and district hospitals in between, a much closer liaison can be established between all workers engaged in the health and family planning programmes. Graded facilities of specialist skills and investigative techniques can then be made available at different levels.

The existing practice of separating curative and preventive medicine, also needs to be reviewed. The old departments of hygiene in medical colleges and their more recent prestigious replacements (Departments of Preventive and Social Medicine) have to be evaluated. Whereas some divisions in the field of medicine like general medicine surgery, obst., ophthalmology, etc. have to be there, it is questionable if divisions between preventive medicine, curative medicine and family planning need to be continued.

It seems that the time is ripe for a re-appraisal of the whole organisation of medical services in the country. The existing divisions both on account of historical developments and of borrowed ideas from the west need to be reviewed and the entire system over-hauled.

6.6. Recommendations :

At present we have a little over 100 medical colleges in the country and in all there are about 370 districts. It is suggested that a medical college with its attached hospital be made responsible for the entire health, family planning and nutrition programmes of say three districts. Of course, the Medical Colleges will have to work in close co-ordination with the District Health & Medical Officers of the concerned Districts for which proper guidelines will have to be laid down. Each district should have a 100 to 150 bedded hospital with specialist services in medicine, surgery, obst., ophthalmology and well developed X-ray and laboratory services. Under the district hospital could be placed four or five, 50 to 75 bedded taluq/tehsil hospitals with general medicine,

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general surgery and obstetrics' provisions and limited X-ray and laboratory facilities. The last link in this chain would be the PHC with 5 to 10 beds. A referral system can be inbuilt in such an organisation whereby patients can be referred from a PHC to the taluq, to the district and to the medical college hospital. The Medical College will also organise in consultation with the District Health and Medical Officer the training programmes for the doctors, nurses and para-medical staff within their jurisdiction. This will make training more relevant to the day-to-day needs of the community. The follow-up services, the records of the patients and vital statistics would also improve.

In addition to the involvement of Medical College Hospitals with rural health institutions specialising in certain fields like cardiology, neurology, orthopaedics, ophthalmology, etc., will have to be created on zonal basis. The extra medical colleges in the large cities of India, i.e., Bombay, Calcutta, Madras and Delhi could be converted into such specialist institutions. The Committee recommends that this concept may be further examined and seriously considered.

Whatever may be the final decision on this concept, the Committee was unanimously of the view that there has to be an integration not only at the level of the peripheral workers but right upto the State headquarters.

A separate note on this point by Dr. D. N. Gupta, Member-Secretary of the Committee, can be seen at page 257.

PROBLEMS TO BE FACED

For a successful implementation of the programme of having multi-purpose workers for health, family planning and nutrition services, a number of problems are to be faced. Broadly speaking, these can be grouped under Administration and Training.

7.1. Administrative Problems

It has been brought out in an earlier chapter that in different States there is a wide variation in the educational qualifications, training background and pay scales of workers who could be grouped together to form multi-purpose workers. In general, the vaccinators have the lowest pay scales and educational background.

To put all these workers into one category of male health workers, is therefore going to raise some administrative problems. The Committee recommends that for the future entrants, a minimum qualification of matriculation in science subjects should be insisted upon. The existing functionaries after suitable training,

may be grouped together in one pay scale with marginal adjustments of their existing scales and protection of the individuals present pay.

7.1.1. Promotional avenues

For a successful implementation of any programme it is essential that the workers involved should have suitable avenues of promotion. The Committee, therefore, recommends that two-thirds of the posts in the higher cadre of the health supervisors be reserved for those who successfully complete at least three years of service as health workers. This period may be extended to five years for those who are not matriculates. The Committee recommends that the new entrants in the health supervisors' cadre should have passed Inter Science or Higher Secondary with science subjects.

A suggestion made by West Bengal Government was to have two or three grades for all types of para-medical staff and a fixed percentage of promotions from a lower to a higher grade. The Committee, however, feels that it would be more advantageous to have only two categories with two grades, one for the junior and the other for the senior health workers.

7.1.2. Another problem faced by the Committee was whether to have the same pay-scale for the male and the female workers. This is relevant as an ANM has a two years pre-service training whereas the malaria or small-pox worker of today has only 1 to 3 months in-service training. Moreover, ANMs are in short supply as compared to the male workers. Conversely it was also felt that for a proper teamwork, no discrepancies between the two workers should exist.

Taking into consideration all this, it is recommended that there should be a uniform grade for both male and female health workers. It is also recommended that fixation of the grade for the time being should be left to an individual State which as far as possible should be the highest that exists in that State for these workers. All the grades, however, should be made uniform in due course.

7.1.3. The Committee also considered the question of the existing Class IV employees like attendants, disinfectors, etc. It was felt that such functionaries may continue wherever they exist and perform the prescribed duties. For future, however, there was no need to have any Class IV employees at the Sub-Centre or sectoral level, except for sweepers.

7.1.4. The question of trained dais is, however, different. In some States, trained dais are regular employees getting fixed amount of Rs. 50 to 100 per month. They help ANMs in their

day-to-day work and also undertake home deliveries. The Government of India had recently appointed a Committee to go into the question of training of indigenous dais. The report has been submitted and this Committee has brought out that suitable incentives have to be offered to the indigenous dais to undergo training. It has also highlighted that in the next 5 to 10 years training of indigenous dais shall have to be stepped up to fill the gap of ANMs shortage. Amongst other suggestions, this Committee has recommended that in order to attract indigenous dais for the training programmes, posts of ANMs attendants may be created on the existing pattern of Haryana giving them a suitable salary of say Rs. 100 a month or so. An alternative suggested is to give them fees on pro-rata basis on the number of cases delivered each month. This Committee endorses the view that creation of posts of suitably trained indigenous dais would be appropriate till such time as the ANM shortage is made good.

7.2. Problems in Training

In recent times, greater and greater emphasis is being placed on training for better job performance. Although the accent on training for improved job functions is of recent origin derived mainly from the experience in American industry, the concept is as old as antiquity. The older method of a son following the trade of his father or of a young apprentice attached to a master craftsman are examples of the same. All the same, there are a number of problems in the sphere of training in the field of health. These problems may be considered as general and specific.

7.2.1. General

By and large, training of the workers engaged in health programmes, doctors, nurses or para-medical staff, is undertaken in specified training institutes. These institutes impart training in an atmosphere which is usually devoid of the knowledge of the actual needs of the workers. It is commonly patterned on similar training/courses run in other places mostly in USA and UK. Not only the main features of these courses are borrowed, but in several instances even the terminology used is the same. Since many of the trainers have had their own training in training institutes abroad, the terms and phrases used by them are foreign and many a time unintelligible to the trainees. During the last few years many terms have been introduced in this field which are not in common usage in this country and poorly understood by all others except those who use them. This has resulted in training for training's sake, devoid of any relevance to the actual needs and the job requirements of the trainees. The trainers hardly move out of their training centres, are not in touch with the field workers

and have very vague ideas of the problems faced by the trainees in their jobs.

The trainees are sent to the training institutes less on their own initiative and more on administrative orders. Promotion is not linked with training. Historically the pattern of our education and training in this country is based on the English model. An individual expects to add some letters of alphabet to his name following formalized training, be it a certificate, a diploma or a degree course. Since no such addition is possible after the present day training courses, and since promotion or even increments in pay are not linked with a satisfactory training, there is reluctance on the part of trainees to come for training. Moreover, the stipend paid to the trainees is low and since he has to run two establishments during this period, he is reluctant to add to his already heavy financial load. All this results in under-utilisation of the training facilities. Then again, frequent transfers from one job to another add to the backlog of training load. The administrator on the other hand feels concerned when he finds that the expenditure on training does not yield commensurate results. This vicious cycle of training un-related to job performance, under-utilisation of woefully inadequate training facilities, high expenditure and poor results, needs to be broken. Those, who are responsible for the delivery of the health care services, must have a say in the training programmes and the trainers must be intimately aware of the requirements of the trainees.

Another problem common to most of the training programmes is the tendency of the trainers to introduce into the training programme as much factual knowledge as possible. There seems to be an apprehension that the trainee may never come again and therefore he should be taught as much as possible. This not only lengthens the course but also makes it less relevant to the prevailing situation. On his return from the course the trainee finds a great deal of what he learnt of no relevance to his job requirements. It is felt that it is better to keep the training courses short and more frequent rather than long and infrequent.

7.2.2. Specific.

7.2.2.1. Doctors

After the prescribed $4\frac{1}{2}$ years under-graduate course an undergraduate undergoes one year of pre-registration internship programme. In service orientation training in family planning, of one week to one month duration, is given in different States. Short training courses of a few days are also given to doctors engaged in special programmes like malaria, small-pox, B.C.G., etc., but such programmes are neither standardised nor are available in all the States.

It is indeed ironical that whereas a doctor is said to be a leader of the team consisting of nursing and para-medical staff, no training is imparted to him to enable him discharge such a function. Throughout his undergraduate career not a single hour is devoted to develop managerial skills, checking of accounts, supervision of his juniors or for other duties expected of a leader. Little wonder therefore that a young medico at the PHC is a leader of his team only in name. Being inexperienced, not only does he have a feeling of technical insecurity but he also feels shaky, in all the administrative duties required to be performed by him. Some of the members of this Committee felt these deficiencies in his training were more responsible for his disinclination to work in villages rather than lack of physical and social amenities.

It was also felt that the medical education that he receives has hardly any relationship to the conditions in which he would be required to work either in the State run health programme or even in private practice. The place where he feels most comfortable is a large hospital with all available specialist backing and the help of sophisticated investigative techniques. Since medical education in this country is based almost entirely on the Western model, he is more suitable for the conditions that prevail in Western countries than in his own.

Till such time as the existing pattern of medical education is changed, the Committee recommends that a pre-service training of 6 to 8 weeks may be given to each PHC doctor to make him familiar with the role that he would be expected to perform as the leader of his team. This would include training in managerial, administrative and financial aspects of his job.

7.2.2.2. Nurses :—In the nursing field the training is either pre-service or in-service. The former includes ANM, LHV and B.Sc. nursing courses and the latter the nurse midwife course.

- (a) ANMs :—The existing course of ANM training is of two years duration after an educational qualification of 7th class pass. The training is imparted in ANM schools most of which are attached to district hospitals or other hospitals. During the course, practical training is imparted in general, medical and surgical nursing and maternity training forms an essential component. Community training is prescribed but not always strictly followed. In general many of the ANM schools are deficient in staff, accommodation (both teaching and hotel) and equipment. In some ANM schools, the existing facilities can only be termed as deplorable.

Government of India recently appointed a committee to go into the curriculum of the ANM training. Its report

has been submitted and is under the consideration of the Department of Family Planning. This Committee is of the view that for future entrants, matriculation should be the minimum educational qualification and the training should be modified giving emphasis on midwifery, public health and nursing in that order. It is also our view that the duration of the course could be reduced to 18 months. This can be conveniently done by reducing the period spent by the trainees in the medical and surgical wards.

The Committee is also of the view that an ANM during her training should stay at a PHC for a period of at least three months. From the Primary Health Centre she can be taken to a Sub-Centre by her tutor to learn the conditions at first hand. Such an exposure would prepare her better for the job that she would be required to perform after her training.

The urgent need of having more ANMs particularly in States like UP and Bihar where their number is extremely small has been emphasised in an earlier chapter.

- (b) L.H.V. :—The controversy involving L.H.V. and nurse-midwife with community health training has been referred to. The Committee is of the view that there has to be a female supervisor for the female Health Workers and that such a supervisor should receive training with a greater community bias rather than hospital-oriented training. The Committee is also of the view that after some years it may be possible to have common courses for all the nurses but for the next 10 to 15 years, it will be profitable to have separate categories of hospitals biased nurses and community oriented nurses.

The Committee also feels that the present-day L.H.V. is not a very effective worker. She does not provide technical guidance to A.N.Ms. nor is she a competent supervisor. The Committee is of the view that her training needs modification. It is recommended that the duration of the L.H.V. course could be reduced from 2½ years to 2 years and emphasis placed on equipping her to become a suitable supervisor and technical expert in the field of maternity and child health for the female Health Workers.

7.2.2.3. Para-Medical.—Apart from a course for Sanitary Inspectors, there are no regular training courses for the para-medical workers engaged in the field of Health. In the Family

Planning, however, 1 to 3 months courses for extensions educators and family planning health assistants are run in regional family planning training centres. The Sanitary Inspector's course used to vary from 5 to 10 months. This has now been made uniform and its duration is 12 months. There are at present 40 Sanitary Inspector schools in different States.

It was painful to observe that whereas the duration of the course for Sanitary Inspectors is one year, their job is mostly confined to supervision of disinfection of wells, looking after sanitation and almost nothing else. One seriously wonders if it is essential to have one year's training for performing the task which Sanitary Inspector does at present.

7.3. Recommendations

Since the number of persons who would require training to equip them for duties of multi-purpose health workers and their supervisors is very large, the Committee attaches a lot of importance to the training programmes.

7.3.1. It strongly feels that all training facilities should be pooled together and training imparted in an integrated manner. It was not possible for the Committee to go into the details of the curricula, content and the duration of the training. The committee feels that it requires a detailed study and some experimentation. Borrowing from the experience of Kiloi experiment, it is suggested that the male health worker may be given one to two weeks initial orientation training, preferably at the PHC followed by 6 to 8 weeks training at selected training centres. Such a training will be for all the national health programmes and in family planning and nutrition.

7.3.2. There are at present 16 field units in different parts of the country. The Department of Family Planning has recently taken a decision to disband the field units as it was felt that there was no longer any need for their continuance in view of the establishment of the regional training centres. The Committee is of the view that since there is going to be a tremendous training load and existing training facilities are meagre, it will be worthwhile to reconsider this decision. The field units are mobile and functioning and can be utilised for providing to the community health workers on the job initial orientation training.

7.3.3. For the new entrants, it is recommended that a one-year pre-service training may be insisted upon. The Health Supervisors may be given one to two weeks orientation training at PHC followed by a similar training imparted to the health workers plus two weeks training in supervisory duties. The new entrants

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should be given 18 months pre-service training. As suggested above, two-thirds of the posts in the supervisory scale should be filled on promotion from the health workers both male and female.

7.3.4 The Committee also recommends that a group consisting of Health Administrators, trainers and technical experts may be appointed to go into this question in depth and suggest training methods and the course contents of the training courses.

7.3.5 For the proper integration of training activities, planning of courses, and bringing out training manuals, etc., the Committee recommends that a Training Division be set up at the Ministry of Health and Family Planning. This Division would look after all training requirements for Health and Family Planning.

MOBILE UNITS

8.1 There are 399 mobile sterilisation units and 456 IUD units in position in different States. The staff in position in these centres varies. The performance of these units has steadily declined over the last three years. At the same time the number of sterilisation beds has increased in both large and small hospitals. The Committee considered the question of continuing the mobile units in view of the changed conditions and was of the view that there was no need to continue these units. During discussions with the State Health authorities this view of the Committee in general was shared by them. However, many State Health Authorities felt that for propagating the use of IUD, the retention of IUD mobile units may be necessary since each unit has a Lady Asstt. Surgeon. Though the declining performance of the units was admitted by all, some State Health Authorities felt that till such time that more lady doctors were available at PHCs it may be necessary to continue the mobile IUD units.

8.2 In a recent communication, Government of India have asked the States to disband mobile service units except one for each district with effect from 1st August, 1973. The pattern of mobile units in the intensive districts would however continue. The vehicles and staff, which will become surplus consequent upon the disbanding of these units, are to be utilized elsewhere. In case of two States, extension of time limit for disbanding of units beyond 1st August, 1973 has been agreed to.

8.3 The Committee recommends that the mobile service unit in each district may be manned by a lady doctor and used primarily as IUD unit. If the lady doctor in such a unit has adequate training and experience in performing tubectomies, her services could also be made available for assisting the PHCs having

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adequate facilities to undertake such operations. The continuance of these units, the Committee recommends, should be linked with completion of fixed targets with proper follow-up action.

SUMMARY OF RECOMMENDATIONS

9.1. Multi-purpose workers for the delivery of health, family planning and nutrition services to the rural communities are both feasible and desirable. (3.4.1)

9.2. A new designation is proposed for the multi-purpose worker—Health Worker (male/female).

The newly designated female Health Workers will be the present ANMs and the newly designated male Health Workers will be the present day Basic Health Workers, Malaria Surveillance Workers, Vaccinators, Health Education Assistants (Trachoma) and the Family Planning Health Assistants. (3.4.5)

9.3. The programme of having multi-purpose workers should be introduced, in the first phase, in areas where malaria is in maintenance phase and smallpox has been controlled. The programme can be extended to other areas as malaria passes into maintenance phase or where small-pox is controlled. This will be the second phase.

The workers engaged in cholera control, filaria and leprosy programme may continue as such for the time being. Similarly, BCG vaccinators may also continue as such. However, all these workers will be made multi-purpose workers in the third phase of the programme. (3.4.3)

9.4. There should be a team of two health workers, one male and one female, at the sub-centre level. (3.4.5)

9.5. After training in all programmes each health worker, male and female, should be given a first-aid kit and also some medicines for minor ailments costing up to Rs. 2,000 per annum for each sub-centre. These medicines should be replenished at regular intervals. (3.5)

9.6. The field visits of the male health workers should not be limited to the homes of the villagers but they should also go to the places of work of the villagers. (4.2.1)

9.7. In order to reduce the-existing shortage of the female health workers, ANMs whose job is confined to the PHC headquarters, and others posted at the district hospitals and at other places should be withdrawn and posted at sub-centres. The posts vacated by the ANMs should be filled by nurse-midwives. (4.1)

9.8. Jurisdiction for each health workers :

9.8.1. As an ultimate objective it is recommended that when adequate facilities of men, material and money are made available the number of PHCs should be increased. It is felt that for a proper coverage there should be a PHC for 50,000 population. Each PHC would have at least two doctors one of them should be a female. (3.4.6)

9.8.2. The population in each PHC would be divided into 16 sub-centres, each having a population of about 3000—3500 depending on topography and means of communications. (3.4.6)

9.8.3. Each sub-centre would have a team of one male and one female health worker. (3.4.6)

9.8.b Taking into consideration the existing number of male and female health workers, it is recommended that:

9.8.b.1. A male health worker would have for the present to look after a population of 6 to 7 thousand. (4.2)

9.8.b.2. A female health worker (ANM) would have a population of 10 to 12 thousand. This population be divided in two zones—one intensive area of 3 to 4 thousand or an area of not more than 5 K.M. in radius from her place of stay, where she will be responsible for Maternity and Child Health and Family Planning services and the other 'twilight' areas where her services will be available for partial coverage on request only. (3.4.4)

9.8.b.3. During the interim period, it is suggested that the services of trained dais be increasingly used particularly in the 'twilight' areas. In order to make the trained dais reliable assistants of the female Health Workers, they may be given a suitable remuneration. (7.1.4)

9.9. Emphasis should be placed in the 5th Five Year Plan on increasing the training facilities of female health workers. The number of ANM schools should be increased particularly in the States that have an acute shortage. (7.2.2.2)

9.10. Jurisdiction for each health supervisor :

9.10.a.1. With an ultimate objective of a PHC for 50,000 population having 16 centres, the work of eight health workers (4 males and 4 females) would be supervised by a group of two health supervisors, one male and one female. (3.4.5)

9.10.a.2. These supervisors should preferably stay in the area of the four sub-centres they have to supervise. (3.4.5)

9.10.b. With the existing situation of having a much larger number of male health supervisors as compared to the female health

supervisor, it is recommended that for the time being one male health supervisor may supervise the work of 3-4 male health workers and the female health supervisor (LHV) may supervise the work of 4 female health workers. (5.3.2)

9.10.c. The present day lady health visitors now designated as female Health Supervisors should be withdrawn from all posts other than those of ANM supervisors. For example, lady health visitors at PHC headquarters, or at urban centres or in district headquarters, etc., should be withdrawn and posted for field work of the sector allotted. Nurse-Midwives may be posted in their place in urban centres and the District for static duties. (5.3.2.)

9.10.d. Nurse-midwives with community health training or qualified public health nurses should be recruited to take up the deficiency in the number of female Health Supervisors. (5.3.2.)

9.11. Two-thirds of the posts of the Health Supervisors both male and female should be reserved for promotion from the health workers' cadres. The remaining one-third should be filled by direct recruitment. (7.1.1).

9.12. Training :

It is recommended that a small group consisting of health administrators, trainers and technical experts be constituted to go into the details of the training that is to be imparted to the future multipurpose workers and their supervisors. Such a group would also devise manuals, and prescribe curricula for the training of the present day uni-purpose workers in order to make them multipurpose workers. The course content and the duration of training for those who are to be recruited in future as multipurpose workers will also be indicated by this group along with the places where such a training can be imparted.

9.12.a The same group should examine the existing curricula of the ANMs and LHVs and suggest ways and means to make the training of these functionaries more practical and job-oriented. (7.3.4)

9.12.b. Pending the recommendations of the proposed group the Committee recommends:

9.12.b.1. The existing uni-purpose peripheral male workers may be given 1-2 weeks orientation training followed by 6 to 8 weeks intensive training. (7.3.1.)

9.12.b.2 The supervisory workers should receive 1 to 2 weeks orientation training followed by 6-8 weeks common training with the junior health workers plus 2 weeks of supervisory training. (7.3.3.)

9.12.b.3. The duration of ANM and LHV training can be conveniently reduced by six months in each case. (7.2.2.2)

9.12.c. The minimum educational qualifications for the new entrants as Health Workers (females) should be preferably matriculation or equivalent with science and biology and for the male Health Workers, Matriculation with Science and Biology. For the Health Supervisors (male and female) Higher Secondary with Science should be the minimum qualification.

9.12.d. Training for all the workers engaged in the field of health, family planning and nutrition should be integrated. (7.3.1)

9.12.e. A training division should be established at the centre. (7.3.5)

9.13. The job responsibilities of the proposed Health Workers and their supervisors (male and female) are given in Chapters IV and V.

9.14. The pay scales of the health workers and their supervisors should, as far as possible, be made uniform in all States. (7.1.2.)

9.15. The doctor-in-charge of a PHC should have the overall charge of all the supervisors and health workers in his area. He will be assisted by the Block Health Assistant for his headquarters' work. (5.5)

9.16. The doctors of PHC during their visits to sub-centres will not only render health care to the population but will also check the work of the health workers and their supervisors. (6.4.1.1)

9.17. All the dispensaries in the jurisdiction of a primary health centre should be linked with the PHC and each dispensary doctors should render referral services to the cases referred by the health workers. (6.4.1.2)

9.18. The doctors at the PHC should divide the population on a geographical basis for their field visits. While one doctor attends to the out-patients and in-patients at the PHC, the other doctors should go out on field visits and extend integrated health, family planning and nutrition services to the population. Thus each doctor will be at the PHC for three days and will be away on field visits for the other three days of the week.

Wherever there is one lady doctor at the PHC, she should render specialist services for maternity and child health to the entire PHC population. (6.4.1.3)

9.19. In order to bring about an effective integration of workers engaged in vertical programmes of health and family planning, the concept should be extended to the district and the

State level. The division of work amongst the district medical officers should be on a geographical basis rather than on a programme basis. (3.6)

9.20. The concept of medical colleges integrating all health, family planning, nutrition, and training programmes, has been put forward. (6.6)

9.21. It is suggested that there is no valid need for mobile sterilisation units. For IUD work there may be a justification for maintenance of some units but their continuation should be made subject to fulfilment of specified targets. (8.3)

NOTE BY Dr. D. N. GUPTA, MEMBER-SECRETARY OF THE COMMITTEE

At present there are a little over 100 medical colleges in the country. Of these, there are four colleges each in the four major towns—Delhi, Calcutta, Bombay and Madras. Six other towns, i.e., Hyderabad, Ahmedabad, Poona, Nagpur, Bangalore and Ludhiana have two medical colleges each. The rest about 71 medical colleges are located in different States either at State headquarters or in large district towns.

Apart from under-graduate medical education which is imparted in each medical college, more than half also impart post-graduate medical education. In many, the attached hospitals impart training to the nurses. A few also undertake training for para-medical staff like laboratory technicians, X-ray technicians. Some also participate in the training of some categories of health staff. As such, medical colleges are important training centres for doctors, nurses and para-medical workers.

Though the medical colleges provide a large nucleus for the training of health workers, it is common knowledge that their role in the health delivery system of the country is meagre. The trainers hardly know the job requirements for which they impart training and those who have to utilize the services have very little say in the training programmes. The producer and the consumer therefore work almost in isolation of each other.

The medical profession in India today is caste ridden. There are generalists and specialists, preventive and curative health-workers, administrators and non-administrators and teachers and non-teachers. In the latter there is again a distinction between clinical and non-clinical teachers. Each group has its own vested interests and there are group rivalries. There are several reasons for this, some historical, come due to influence of rapidly advancing science, but mostly on account of a lack of an over-view by a central body or authority. This has resulted in a situation where both the profession and the public are dissatisfied.

It is felt that if the medical colleges could be made responsible for the health delivery services of a section of population this trend can be reversed. The recommendation in the report of only coordinating the existing patterns is considered a mere patch work and the situation will not change materially. It is felt that direct and unequivocal responsibility for training and health care must be given to a single authority. The country be divided on population basis or the existing districts could be taken as units, three or four being entrusted to each medical college for training and comprehensive health care including family planning and nutrition programmes. In such a set-up there will be graded facilities for health care, investigative facilities, and specialist services. The health staff working in all the institutions in the area from sub-centre to the medical college hospital will be the staff of the medical college. There will be no division between preventive and curative medicine and teachers and non-teachers. Facilities of all the centres, PHC, Taluk, District or the medical college would be utilised for training. The staff would not be static but could be moved from one to the other centre. Those who dispense curative medicine, be it in paediatrics, ophthalmology, maternity or general medicine would also look after its preventive side.

Such a re-organisation would also result in a better referral system whereby patients can be referred from one level to the other and their records can be complete and traceable whenever needed. A greater cohesion in the staff whether of the PHC or of the district would also result, since all will belong to one department. The training imparted would become meaningful since it would be related to the actual requirements. The much desired shift in the outlook of health staff of all categories from the hospital bias to the community would be brought about as all would be required to work in the community for their training. The young medicos will develop greater self-confidence as they would get a feeling of belonging to a team though working at different levels. A great deal of team spirit is also likely to develop between the doctors, nurses and para-medical staff as they would have common training places.

It is thus visualized that a medical college (if preferred it may be redesignated Health Institute) will become a miniature directorate where the only division is of various branches of medicine. The Civil Surgeon, District Medical Officers of Health, Family Planning Officers, etc., would merge in the larger unit each member engaged both in health delivery and training.

It is suggested that this concept may be tried on experimental basis in some medical colleges of some States. Alternatively, a Commission may be set up to examine this concept in depth.



**COMPENDIUM
OF
RECOMMENDATIONS
OF
VARIOUS COMMITTEES
ON
HEALTH DEVELOPMENT
1943-1975**

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V—REPORT OF THE GROUP ON MEDICAL EDUCATION AND SUPPORT MANPOWER—1975 (SHRIVASTAVA COMMITTEE)

V—REPORT OF THE GROUP ON MEDICAL EDUCATION AND SUPPORT MANPOWER-1975

(SHRIVASTAVA COMMITTEE)

INTRODUCTION

1.01 The Government of India, in the Ministry of Health and Family Planning, have invited attention to some of the pressing problems and needs of medical education and support manpower and especially to:

- the essentially urban orientation of medical education in India, which relies heavily on curative methods and sophisticated diagnostic aids, with little emphasis on the preventive and promotional aspects of community health,
- the failure of the programmes of training in the fields of nutrition, family welfare planning, and maternal and child health to subserve the total needs of the community because of their development in isolation from medical education,
- the deprivation of the rural communities of doctors, in spite of the increase of their total stock in the society,
- the need to re-orient undergraduate medical education to the needs of the country, with emphasis on community rather than on hospital care, and
- the importance of integrating teaching of various aspects of family planning with medical education.

and have expressed the view that the structure of medical education has to be modified to meet the changing requirements and to provide adequately for future needs, particularly of the rural community. Government have also stressed the need to improve the delivery of health services by better trained and more qualified personnel working under the supervision of fully-equipped medical doctors.

1.02 In the light of these limitations of medical educational health services, we have been requested—

- (a) to devise a suitable curriculum for training a cadre of Health Assistants conversant with basic medical aid, preventive and nutritional services, family welfare, and maternity and child welfare activities so that they can serve as a link between the qualified medical practitioners and the multipurpose workers, thus forming an

effective team to deliver health care, family welfare and nutritional services to the people;

- (b) to suggest steps for improving the existing medical educational processes as to provide due emphasis on the problems particularly relevant to national requirements, keeping in view the recommendations made by earlier Committees on Medical Education specially the Medical Education Committee (1968) and the Medical Education conference (1970) and to suggest suitable ways and means for implementing these recommendations; and
- (c) to make any other suggestions to realise the above objectives and matters incidental thereto.

1.03 In our very first meeting, certain issues arose regarding the approach, scope and emphasis of our Report and we, therefore, sought an interview with the Minister of Health and Family Planning, and in the light of our discussions with him, it was decided that our proposals for the basic reforms in medical education and the organisation of support manpower should be made in the context of the *organisation of nation wide network of efficient and effective health services for the country* for which we could indicate a tentative framework. It was also decided that we should emphasize a few major programmes for immediate action and highlight the urgent need to create the essential structures necessary for implementing the reform of medical education. Our detailed proposals on the subject which follow have to be understood in the light of these decisions which were approved of by the Minister of Health and Family Planning.

1.04 We have examined all the earlier documents available on the subjects referred to us as well as the memoranda and suggestions received from various associations and individuals*. We would like to convey our grateful thanks to Dr. K. S. Sanjivi, Director, National Health Services, Madras; Dr. A. Timmappayya, Director, National Institute for Health Administration and Education, New Delhi; Dr. P. R. Sondhi, Director of Health Services, Haryana; and Dr. D. B. Bisht, Principal, Jawaharlal Institute of Post-graduate Medical Education and Research, Pondicherry, who gave us their valuable advice and participated in some of our meetings. We would also like to place on record our appreciation of the unstinting hard work put in by our Member Secretary, Dr. Sharad Kumar, but for which we would not have been able to finish our work in so short a time, the assistance, rendered by Dr. S. K. Sen Gupta, Director, C.B.H.I., and Dr. B. C. Ghoshal, A.D.G. (HA) in our deliberations and the efficient secretarial assistance provided by the Directorate General of Health Services.

*The details are given in Appendix II.

HEALTH SERVICES FOR INDIA : A TENTATIVE FRAMEWORK

2.01 The Bhore Committee (1946) put forward, for the first time, comprehensive and bold proposals for the development of a national programme of health services for the country. During the last 30 years, sustained efforts have been made to implement its recommendations as well as those of other important committees in this field. In spite of the substantial investments made and the impressive results obtained particularly in the production of medical manpower, the health status of the Indian people is still far from satisfactory. The sheer magnitude of the tasks that shall remain is so great and the additional resources available for the purpose appear to be so limited that one almost despairs of meeting our health needs or realising our aspirations on the basis of the Broad models we seem to have accepted. A time has, therefore, come when the entire programme of providing a nation wide network of efficient and effective health services needs to be reviewed *de-novo* with a view to evolving an alternative strategy of development more suitable for our conditions, limitations and potentialities.

General Principles

2.02 This strategy, in our opinion, will have to satisfy certain basic criteria such as (1) development of an integrated service covering promotive, preventive and curative aspects of health services and family planning; (2) universal coverage and equal accessibility to all citizens; (3) full utilisation of para professional resources available in the community, and their supplementation by a well structured system of referral services; (4) promotion of indigenous research as well as full use of the latest scientific developments made elsewhere in the field; and (5) the possibility of practical implementation within the financial resources likely to be available. In our opinion, this strategy will have to be based on the following general principles.

- (1) [A universal and egalitarian programme of efficient and effective health services cannot be developed against the background of a socio economic structure in which the largest masses of people still live below the poverty line. So long as such stark poverty persists, the creative energies of the people will not be fully released; the state will never have adequate resources to finance even minimum national programmes of education or health; and benefits of even the meagre investments made in these services will fail to reach the masses of the people. There is, therefore, no alternative to making a direct, sustained and vigorous attack on the problem of mass

poverty and for creation of a more egalitarian society. A nation-wide programme of health services should be developed side by side as it will support this major national endeavour and be supported by it in turn.]

2. Development essentially means the development of men and not of things. It also implies an emphasis on the development of human rather than of material resources. For this purpose, the most significant tools are education and health. It will be difficult to define the *inter-se* priority between them. But there is no doubt that, taken together, they form the most powerful instruments for the development of man and human resources. Both education and health should therefore, receive the highest priority and adequate allocation of resources, both at the Centre and in the States and these in their turn, should be supplemented by local resources. What is even more important, the available resources should be used most economically and supplemented by well planned human effort to obtain the best results possible.]
3. We have adopted tacitly, and rather uncritically the model of health services from the industrially advanced and consumption oriented societies of the West. This has its own inherent fallacies : health gets wrongly defined in terms of consumption of specific goods and services; the basic values in life which essentially determine its quality get distorted; over professionalisation increases costs and reduces the autonomy of the individual; and ultimately there is an adverse effect even on the health and happiness of the people. These weaknesses of the system are now being increasingly realized in the West and attempts are afoot to remedy them. Even if the system were faultless, the huge cost of the model and its emphasis on over professionalization is obviously unsuited to the socio-economic conditions of a developing country like ours. It is, therefore, a tragedy that we continue to persist with this model even when those we borrowed it from have begun to have serious misgivings about its utility and ultimate viability. It is, therefore, desirable that we take a conscious and deliberate decision to abandon this model and strive to create instead a viable and economic alternative suited to our own conditions, needs and aspirations. The new model will have to place a greater emphasis on human effort for which we have a large potential rather than on monetary inputs (for which we have severe constraints).

4. Health is essentially an individual responsibility in the sense that, if the individual cannot be trained to take proper care of his health, no community or State programme of health services can keep him healthy. The issue is, therefore, basically one of education. Every individual must be given the relevant information about his body and its functioning, must be taught the essential health skills (including the care of himself and of other persons in illness and preventive aspects of health, and must be enabled to develop values of self control and discipline without which no person can remain healthy. It is also desirable to educate an individual in developing proper attitudes to health and disease, to accept old age gracefully as a natural process, to overcome abnormal sensitivity to physical pain and to learn to accept death cheerfully as an essential ingredient of life itself. It is a pity that these basic values which our tradition has been inculcating among our people for generations are being eroded, rather than strengthened in the processes of modern formal education.
5. [The community responsibilities in health are even more important. It is the duty of the community to provide a proper environment for helping each individual to be healthy. This will include, amongst others, the supply of safe drinking water; adequate measures for disposal of human excreta; avoidance of air pollution; and control of communicable diseases. In our own tradition, these social aspects of health are the weakest and they, therefore, need strengthening and the highest emphasis.]
6. The State has an over all and supreme responsibility for providing a comprehensive and nationwide net work of health services. This includes; and the direct attack on mass poverty; provision of adequate nutrition; development of integrated services in education and health; and the organization of para professional and professional services to cover the promotive, preventive and curative aspects, with emphasis on maternal and child health services which are of the highest emphasis in this country. Unfortunately, several of these programmes have received inadequate attention, all of them have developed mostly in isolation from one another and there has been an undue emphasis on the curative aspects which are probably the least important. It is high time that all these programmes are developed as a package deal and in their proper perspective.

7. The over-emphasis on provision of health services through professional staff under state control has been counter productive. On the one hand, it is devaluing and destroying the old tradition of part time semi-professional workers which the community used to train and throw up and which, with certain modifications, will have to continue to provide the foundation for the development of a national programme of health services in our country. On the other hand, the new professional services provided under state control are inadequate in quantity (because of the paucity of resources) and unsatisfactory in quality (because of defective training organisational weaknesses and failure of rapport between the people and their so called servants). What we need therefore, is the creation of large bands of part time semi professional workers from among the community itself who would be close to the people, live with them, and in addition to promotive and preventive health services including those related to family planning, will also provide basic medical services needed in day-to-day common illnesses which account for about eighty per cent of all illnesses. It is to supplement them, and not for supplanting them, that we have to create a professional, highly competent dedicated, readily accessible, and almost ubiquitous referral service to deal with the minority of complicated cases that need specialized treatment.

8. In the existing system, the entire programme of health services has been built up with the metropolitan and capital cities as centres and it tries to spread itself out in the rural areas through intermediate institutions such as Regional, District or Rural Hospitals and Primary Health Centres and its sub centres. Very naturally, the quantum and quality of the services in this model are at their best in the Centre, gradually diminish in intensity as one moves away from it, and admittedly fail at what is commonly described as the periphery. Unfortunately, the 'periphery' comprises about 80 per cent of the people of India who should really be the focus of all the welfare and developmental effort of the State. It is, therefore, urgent that this process is reversed and the programme of national health services is built with the community itself as the central focus. This implies the creation of the needed health services within the community by utilizing all local resources available, and then to supplement them through a referral service

which will gradually rise to the metropolitan or capital cities for dealing with, more and more complicated cases.

9. Throughout the last two hundred years, conflicts have arisen, in almost every important aspects of our life between our traditional patterns and the corresponding systems of the West to which we have been introduced. In many of these aspects the conflicts are being resolved through the evolution of a new national pattern suited to our own genius and conditions. In medicine and health services unfortunately, these conflicts are yet largely unresolved and the old and new continue to exist side by side, often in functional disharmony. A sustained effort is, therefore, needed to resolve these conflicts and to evolve a national system of medicine and health services, in keeping with our life systems, need and aspirations.
10. Education and health have continued to grow in isolation from each other to the detriment of both. It must now be emphasised that no programme of education (which means a sound mind in a sound body) can succeed unless it is blended with that of health education. Similarly, no programme of health services (which is essentially one of individual responsibility) can succeed without education which alone can give each individual the needed information, skills and value orientations. We must, therefore develop these programme together, not only in the formal education system, but also through non-formal methods which cover the out-of-school children and youth, the adult population, and especially the workers.
11. Nutrition is one of the most important components of health. There is overwhelming evidence of hunger and malnutrition among the large masses of people living below the poverty line, and especially among the vulnerable groups of young children and pregnant and lactating mothers. The problem will, therefore, have to be tackled on several fronts. We must produce more food and ensure its proper storage. A large scale public distribution system must be developed and employment at reasonable levels should be available to every person so that he will be able to procure at least the minimum food needed for himself and his family. Programmes of supplementary feeding for vulnerable groups like pregnant and lactating mothers or young and school-going children or for the control of preventable diseases

like nutritional blindness or anaemias and goitre, should be developed. A programme of immunization has also to be developed side by side to break the vicious circle which has already set in, viz., malnutrition reducing the resistance to infection and infection, in its turn, accentuating the incidence of malnutrition. Equally important is the educative programme of improving the cooking and dietary habits of the people of scientific lines.

12. Family planning is the basic issue in development just as development itself is the basic issue in population control. A massive and urgent programme of family planning, based on the application of existing contraceptive technology, must be developed on a warfooting and the birth rate must be brought down to replacement levels in as short a time as possible. This will include simultaneous action on several fronts; educating public opinion about the consequences of the population explosion that has already reached 600 million and the staggering problems which the country will have to face if its population rises, as anticipated, to a billion mark level by the turn of the century; adoption of measures to spread the small family norm through education, reduction in infant mortality, increasing the cost of bringing up children, etc., spread of education among women and improvement of their status, development of programmes of non-formal education (in which family planning is an essential ingredient) for young persons in the age group 15-25 training of large numbers of family planning workers from the community itself and particularly from among the educated housewives; and making family planning an integral and important part of the comprehensive health services of the country.

2.03 We recommend that Government should undertake the task of evolving a national consensus on the broad strategy to be adopted for the development of a comprehensive nation-wide network of health services in the country during the years ahead. The general principles stated above and the broad framework which they indicate for the development of these services may be taken as a basis for consideration in this effort.

MAJOR PROGRAMMES FOR IMMEDIATE ACTION

3.01 If a viable model of national health services is to be created on the basis of these broad principles, immediate action will have to be initiated on the following four programmes, viz.,

1. Organisation of the basic health services (including nutrition, health education and family planning) within the

community itself and training the personnel needed for the purposes;

2. Organisation of an economic and efficient programmes of health services to bridge the community with the first level referral Centre, *viz.*, the PHC (including the strengthening of the PHC itself);
3. The creation of a National Referral Services Complex by the development of proper linkages between the PHC and higher level referral and service centres; and
4. To create the necessary administrative and financial machinery for the reorganisation of the entire programme of medical and health education from the point of view of the objectives and needs of the proposed programme of national health services.

We shall discuss these four programmes seriatim in the sections that follow.

HEALTH SERVICES AND PERSONNEL IN THE COMMUNITY

4.01 The first assistance that any community needs in the form of health services should be provided within the community itself.

4.02 For some of these services, it is necessary to provide paid and trained professionals in public services. Some other services may be provided by fully trained professionals who are self employed. It is, however, erroneous to assume that these services should be provided only by these two categories of professional staff. At the community level, what is needed most is not professional expertise so much as nearness to the community, its confidence, emotional rapport with the people, willingness to assist, low cost, and capacity to spare the needed time. It is, therefore, necessary that some of these services should be provided by the members of the family itself and also by part time trained para professional persons who operate on a self employment basis. Even in societies which are affluent enough to provide all health services through fully trained professional persons, either in public service or in self employment, it is now become increasingly evident that the quality of life and of the health services will improve through the introduction of suitably trained part time para professional persons working on a self employment basis. For developing countries whose resources are extremely limited this method of providing health services is not only desirable but also inescapable.

4.03 It may be recalled that, in the past, almost all health services used to be provided by part time para professional

persons from the community itself who worked on a self employment basis. The practitioner of indigenous systems of medicine trained in a family tradition or the village dais who still perform the bulk of deliveries are instances of this practice. While the advantages of the system, such as its closeness to the community or low cost, are obvious, its main weakness lies in the fact that the training provided is limited and unrelated to modern developments in the medical and health sciences so that it often leads to quackery. The modern system which employs only the fully trained persons on a professional basis is no doubt very competent from a technical point of view. But it lacks some of the emotional, psychological and social advantages of the traditional system and it so costly that we will not be able to universalise it. What is necessary therefore, is to combine the good features of both the systems. If we carefully select the individuals and train them, according to the best knowledge and skills made available by the latest developments in medical and health sciences, a large number of people from the community itself would be available for providing the elementary health and medical services needed by the community. Such a programme would serve three important purposes. (1) It would create an agency which is close to the people, has their confidence and is economical to operate, for providing the immediate, simple and day to day medical and their services needed by the community; (2) it will also create the foundation on which a super-structure of fully-trained and professional referral services can be advantageously built; and (3) it would have created a pattern of medical and health services which would be qualitatively better than the present system and still remain within the financial resources that are likely to be available in the near future.

4.04 Various steps will have to be taken to organise the large number of para professionals who will be needed in every community to provide the first essential simple and day to day health and medical services. Aptitude for such work is often developed within the family itself through participation in the provision of such services or in attending upon sick persons. This motivation would have to be strengthened further through the education system which should provide a core of health education to every student and also require him, as a part of work experience or social service, to nurse sick persons in his own family or outside and also it participate in the development of services of a promotive or preventive character. This will enable a large number of individuals to discover their own interests and aptitudes. Many of them may later become para professionals by acquiring the specialised skills necessary and operate on a part time self employment basis or become full time professionals within or outside the public services.

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4.05 It would also not be proper to regulate the number of such workers. Such a step would lead to the creation of a scarcity and monopoly situation with well known adverse consequences. It should, on the other hand, be open to any individual with the necessary aptitude, background and talent to acquire the necessary skills and to provide the services. In fact, the more such trained people in a community the better for all concerned.

4.06 In every community, we should have trained local, semi professional, part time workers of at least the following categories :—

1. An adequate number of dais to provide maternity services (some of them could also be trained to the whole range of MCH services including family planning).
2. A large number of family planning workers from among adults, young men, housewives and public function.
3. Persons who will be able to dispense a set of specific remedies selected from all systems of medicine for ordinary, common ailments.
4. Persons who have been trained in the skills needed in programmes for the control of communicable diseases and whose services can be harnessed readily in case of emergencies.
5. Persons who can help to develop promotional and preventive health activities (especially those relating to improved nutrition, environmental sanitation, control of common diseases, yoga, physical exercise and so on).

4.07 These skills could be imparted to selected young persons from the community who may have the necessary aptitudes. One important group which may be considered in this context is that of the primary school teachers who now number about 2.5 million and are present even in the remotest rural areas and who have considerable acceptability and status in the community. Another important group would be that of educated housewives. An increasing pool of educated women is now becoming available even in rural areas (the census of 1971 records 1.5 million women in rural areas who are enumerated as housewives or non-workers but who are educated up to matriculation and beyond) and these form a large and useful pool for the training of such workers, including those for family planning. These workers, it may be pointed out, need not necessarily be multipurpose.

4.08 We would like to emphasize the point that periodical retraining of these personnel is extremely important as well as to provide them with necessary guidance and counselling in their

day to day work. The referral services should also be made available to them. In fact they should be looked upon as important links between the community and the trained professionals and the organized referral services.

4.09 This emphasis on the creation of a large band of semi-professional and part time health workers in the community itself is proposed merely as a second level supplementary personnel to fully trained professionals and not as a substitute for them. Where doctors or other personnel trained in indigenous or modern system of medicine are available, their services should be fully utilised, not only to provide health care to the people in the way best suited to each case, but also to train (or retain) and assist other workers, honorary or part time, of a semi professional character. We visualize that these two cadres would work closely together in an integrated fashion, the para professional personnel in the community relieving the trained professionals of the innumerable small things over which their time would otherwise be wasted and the trained professionals taking over the more complicated cases direct and also providing referral and guidance services to the para professional people.

4.10 It would not be desirable to try to convert these para professional workers into a cadre, to give them remuneration from State funds or to supervise them. This will alienate them from the people and convert them into petty bureaucrats with all their faults. The general policy should be to leave them free to work with all their faults. The general policy should be to leave them free to work with the community on the basis of the trust and confidence they can generate. The investment of the State in the organisation of this group of para professionals within the community should be limited to the provision for training and retraining, free of cost, on as large a scale as possible and to the provision of guidance and counselling through health workers, the proposed health assistants and doctors. Where necessary, the State should make supplies of materials (such as specified remedies) available at reasonable prices and on an assured basis. The overall financial investment on all these items would be comparatively small ; and but the returns therefrom would be far greater.

4.11 These proposals might perhaps cause an adverse reaction in certain quarters on the ground that they would create, and let loose on the community, a large number of quacks who, in the long run, may do more harm than good. But a close examination will show that this will not be the case. The role assigned to these para professional functionaries in the fields of promotive or preventive aspects of health and family planning are basically educational and are capable of doing immense good without any untoward implications. Some apprehensions may arise with regard

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to the role in curative aspects of health. But here, as we have emphasized, their function will be limited to the use of a few specified remedies for simple, day to day illnesses. There are also several safeguards in these proposals such as careful selection, provision of training and retraining, guidance and counselling and also periodical evaluation. Care has also been taken to ensure that they supplement the work of the professionals and not work in conflict or in competition with them. All things considered, we share no apprehensions on the subject and actually feel enthusiastic about most features of the scheme.

4.12 The details of several problems will have to be worked out before the scheme becomes operational. For instance, we will have to decide upon.

- selection criteria for workers,
- the duration and content of their training and re-training,
- the provision of guidance and counselling, including periodical evaluation,
- the preparation of materials for these personnel in simple terms and in all the Indian languages, and
- determination of the institutions where their training, etc., will be conducted, including the training for the trainers.

We recommend that these details should be worked out by the Director General of Health Services, once the programme is accepted in principle by Government.

4.13 It is obvious that the scheme cannot immediately be started all over the country. Similarly, it would also be futile to start it in a few areas only. What is needed is a fairly large beginning and a fairly rapid generalization in the light of the experience gained which should be evaluated continuously. We, therefore recommend, that :

1. All the details of the scheme should be worked out by the Director General of Health Services, as early as possible.
2. After early consultations with the State, the scheme should be finalised quickly and at any rate before the end of the current year.
3. The necessary financial provisions for the scheme should be made in the Central and State budgets for 1976-77 as a centrally sponsored scheme of the Fifth Five Year Plan.
4. The work of the scheme should begin in selected areas in each State/Union Territory in 1976-77 and

5. The scheme should be expanded to cover a fairly large part of the country by the end of the Fifth Plan and the entire country by the end of the Sixth Plan.

4.14 These bands of community level health workers once created, will form the links between the people at large and the multipurpose workers functioning at the sub centres and the doctors at the PHC level. This will make a much better utilization of their time and energy possible. Their training should, therefore, be adequate to ensure that, while they can freely offer services within a well defined sphere of simple urgent and day to day needs of the community, they would be able to decide when a case needs referral or consultancy from trained professional staff and take action accordingly without hesitation or delay.

FROM THE COMMUNITY TO THE PRIMARY HEALTH CENTRE

5.01 Beyond the community (and the local professional or para professional health workers within it) lies the next stage in the organisation of health services. In this area, we have, at present, various categories of health workers and their supervisors at the sub Centres and the PHC itself which also has its complement of doctors and other facilities. In our opinion, the provision of these services between the community and the PHC needs reorganisation and the Primary Health Centre itself requires strengthening.

5.02 The Bhore Committee visualised the development of the Primary Health Centres in two stages. As a short terms measure, it was proposed that each PHC set up in the rural areas should cater to a population of 40,000 with a secondary health centre to serve as supervisory, coordinating and referral institution. For each PHC, two medical officers, four public health nurses, one nurse, four midwives, four trained dais, two sanitary inspectors, two health assistants, one pharmacist and fifteen other Class IV employees were recommended. In the long term, the Committee visualised a PHC to serve a population of only 20,000. The function of the PHC were to include medical relief to both in-patients and outpatients, maternal and child health services including family planning, control of communicable diseases, school health, environmental sanitation and health education. But unfortunately it has not been possible on financial grounds, to implement even the short term proposals of the Bhore Committee to this day. At present, the Primary Health Centre serves a total population of about 80,000 to 120,000 and has a much smaller staff than that visualised by the Bhore Committee for a population coverage of 40,000 only. It also has a number of sub centres,

roughly at the rate of one for every 10,000 population. Under this situation, and especially in the absence of community level health workers on the desired scale and of the right quality, it is no wonder that the out reach of our Primary Health Centres in rural areas is very inadequate.

5.03 It will not be financially practicable to increase the number of Primary Health Centres except marginally. We, therefore, recommend that the focus of development in the immediate future should be on the following three programmes :—

- (1) To reorganise the service of Health Workers and to increase their number as resources become available and ultimately to provide one male and one female health worker for every 5,000 population;
- (2) To create a new cadre of health assistants by providing suitable training to the existing health supervisors and to increase their number so that there is ultimately one health assistant (male/female) for every two health workers (male/female); and
- (3) To strengthen the Primary Health Centres.

Reorganisation of the Services of Health Workers and the Creation of the New Cadre of Health Assistant

5.04 During the last twenty four years, the cadres of functionaries which provide various health services to the community have multiplied very greatly because each health programme was run virtually independently of the others and with little coordination, both among the field workers and amongst those at the supervisory level. Even the two doctors at the Primary Health Centre had separate spheres of activity, one being devoted to the family planning programme and other to the provision of general health services. It is now realised that in the interest of economy as well as of efficiency, it is necessary to create a single multipurpose cadre to provide all the different promotive, preventive and curative health services needed, (including the control of communicable diseases) and also to include within the responsibilities of this cadre, a modicum of curative services, an emphasis on maternal and child welfare services and family planning. The proposals of the Kartar Singh Committee in this regard have been accepted by Government and are also under various stages of implementation in the States. We fully support them subject to the observations made in the following paragraphs.

Health Workers

5.05 At present, there is a male health worker for every 6,000-7,000 population and one female health workers for every 10,000 population. The proposed target for the Fifth Five Year

Plan is to provide one male and one female worker each for a population of 8,000. While we welcome this, we recommend that, by the end of the Sixth Plan, we should strive to provide one male and one female worker each for every 4,000 population.

5.06 We also recommend that every health worker should be trained and equipped to give simple special remedies (including proven indigenous remedies as well) for day to day illness. Apart from the fact that this will provide an essential and needed curative service to the people, it will also increase the acceptability, utility and efficiency of the health workers themselves.

Health Assistants

5.07 At present, there are several cadres of unifunctionary supervisors. The Kartar Singh Committee has done a signal service by suggesting the integration of all of them into a single cadre of health supervisors. While we endorse these proposals, we are of the view that they are inadequate to meet the situation and recommend the following changes :—

1. All this supervisory personnel should be designated as 'Health Assistant' to highlight the role of assisting the work of the doctors at the level of forming a link between the PHC and the health workers.
2. The present position is that we have one male supervisor for every 20,000 population (or one for every three male health workers) and one female supervisor for every 60,000 population (or one for every six female health workers). In the Fifth Five Year Plan, there is a proposal to increase the number of female supervisors. The Kartar Singh Committee has recommended one supervisor for every four health workers. We recommend that we should strive to provide one male and one female health assistant for two male and two female health workers respectively.
3. The Health assistants should be located invariably at the sub centres and not at the PHC.
4. The Health assistants, like the health workers, should also be trained and equipped to give specified remedies for simple day to day illnesses but at a higher level of competence. The curative services for which they should be trained, the medical kit which they should carry, all this needs to be carefully worked out, should be immediately undertaken by the Director General of Health Services.
5. While the health assistants do have a supervisory role, they should also function as health worker in their

own area, carrying out the same duties and responsibilities, but at a higher level of technical competence. They will be specially responsible for the promotive and preventive health measures and all the national health programmes. The female health assistant should take particular care of children and expectant and lactating mothers.

5.08 Our proposals regarding health assistants may fall in two phases. The first phase is qualitative in the sense that it is not proposed to increase the total number of persons at the supervisory level, but to replace the existing varieties of unfunctionaries by a broad based single cadre of multipurpose, middle level workers, comprising the sub-doctorate and sub-professional groups. From the point of view, persons in the existing categories of health supervisors, after suitable screening, should be given intensive training for varying periods so as to fit them for the job expected of them as health assistants. In the second phase, we propose that the number of health assistants should be increased as suggested above in para 5.07(2).

5.09 We regard the cadre of health assistants as incentive and promotional cadre for health workers. We, therefore, recommend that the recruitment to the category of health assistants should ordinarily be restricted to health workers who are duly qualified to shoulder the higher responsibilities involved. Where, however, such qualified health workers are not available for promotion, an alternative channel of lateral recruitment from the open market should be provided.

5.10 Details relating to eligibility qualifications for promotion or selection into the category of health assistants, the period and kind of training that will have to be provided to health workers for the purpose, the institutional arrangements needed for such training and its curriculum content, etc. are important and will have to be worked out by each State on the basis of general guidelines provided by the Centre*. In course of time, as the health assistants replace the existing health supervisors, the latter category would eventually be phased out.

5.11 Both the health workers and the health assistants will have to function as important links in the referral services. They will deal freely with cases within their sphere of competence; but their training would have to emphasize that they should refer the cases beyond their competence to the appropriate agency without delay or hesitation.

*We have given, in Appendix III, a broad outline of the functions of the Health Assistant as well as the venue and curriculum of training.

5.12 While attempts to induce doctors to settle down in rural areas should continue and the services of all available doctors in rural areas should be fully utilised, there is no doubt that the category of health assistants will still be needed for years to come to supplement the available pool of medical man power in rural areas, it is also necessary to emphasize that the health assistant is not a functional substitute for a doctor. But he will be providing useful health services in the sub centres and thus will increase effectively the out-reach of the Primary Health Centres themselves.

The Primary Health Centre

5.13 The creation of local para professional workers in the community itself to provide simple specified medicines for common day to day illness and the introduction of a curative function in the duties of the health workers and health assistants in providing some medical relief to the community will lead to a change in the functions and responsibilities of the doctors at the Primary Health Centre. They need no longer spend a greater part of their time, as at present, in providing simple medical relief and would thus be able to devote more attention to the referred cases and to the development of provision and preventive programmes of community medicine and health. In spite of this, however, we do feel that the Primary Health Centre itself needs to be strengthened in manpower resources. In view of the fact that women and children form the bulk of the population, we recommend that the immediate programme should be to add one more doctor, especially to look after maternal and child health services and one nurse. This will not only create an important readily accessible professional skill in the PHC area, but would also ensure greater coverage and more effective use of the existing beds at the PHC. Similarly, the existing allotment of Rs. 12,000 earmarked for the purchase of drugs at each PHC is inadequate and needs to be increased. The additional funds needed for this programme should be found on a priority basis.

5.14 The National Service Act, in its application to the medical profession, need not be used to strengthen the medical manpower available at the Primary Health Centre. It is also not desirable to post the young inexperienced doctors at the Primary Health Centres and more so because the present system of medical education does not produce a doctor properly oriented to community needs. It should, however, be possible to use the newly recruited young doctors to strengthen the medical manpower at the medical college, regional district or taluk/tehsil hospitals and to utilise the services of some senior doctors who would thus be relieved to work at the PHC level. We further recommend that

the possibility of making a rule to the effect that every doctor in public health service shall spend, between the fifth and fifteenth year of his career, a period of not less than two consecutive years at a PHC should also be explored.

THE REFERRAL SERVICES COMPLEX

6.01 We are of the opinion that the para-professional groups within the local communities, the health workers, the health assistants and the PHC doctors cannot satisfactorily perform the duties and functions expected of them unless they are properly integrated into a well-organised referral system which would provide them with adequate support and guidance. From this point of view, it is necessary to develop an efficient and readily accessible system of referral from the PHC to higher and more sophisticated echelons in the neighbouring taluka/tehsil, district, regional or medical college hospitals. At present, most of these hospitals function in almost total isolation from one another and without satisfactory links with the local community and a wide gulf separates them from the Primary Health Centres. We strongly feel that this situation has to be immediately remedied. We, therefore, recommend that the Primary Health Centres, as well as the Taluka/Tehsil, District, regional and medical college hospitals should each develop living and direct links with the community around them and also have functional links with one another within a total referral service complex. This linkage can best be secured through a properly organized internship programme which will be discussed in the following section. Once established, it will create a viable and economic referral services complex which will have several advantages. It will provide a programme of total health care : promotive, preventive, curative and rehabilitative. It will also form a nidus for training in community medicine. The services of the outpatient departments of the semi-urban and urban hospitals would become available to individuals and their families in rural areas. A medical college hospital whose health care has its out-reach in the community through such a complex can become an effective training ground for training personnel oriented to community health and for the more efficient delivery of health services to the community. Taken as a whole, the programme will not only provide the most efficient health care services possible to the community but will also provide feedback from the community to the system of health care itself and lead to great improvements therein over time.

THE ESTABLISHMENT OF THE MEDICAL AND HEALTH EDUCATION COMMISSION

7.01 It is common knowledge that the existing system of medical education does not prepare the right type of personnel

needed for a national programme of health services. If the system of comprehensive health care visualized in the preceding sections is to be developed properly and worked efficiently, it is obviously necessary to restructure the entire programme of medical education.

Basic Issues in Medical Education

7.02 Among the basic issues in medical education, probably the most important is the training of the general medical practitioner who occupies a central place among the different functionaries needed for the health services. His work is not merely with treatment of sickness and prevention of disease but also with those social and cultural problems that contribute to the fabric of health. His commitment is to man and to the human family. He must change his outlook from an excessive concern with disease to a role of full social responsibility. The manner in which physicians are educated and the nature of the educational outcome are therefore of paramount importance.

7.03 It is widely recognized that the present system of undergraduate medical education is far from satisfactory. Despite the recommendations made by numerous Committees and Conferences, improvements in the quality and relevance of medical education have been tardy. Although the setting up of Departments of Preventive and Social Medicine in the medical colleges over 15 years ago was a step in the right direction, this by itself has not met with significant success as it lacked scholarly foundations and the field practice areas were not adequately prepared. The stranglehold of the inherited system of medical education, the exclusive orientation towards the teaching hospital (five years and three months out of five years and six months of the total period of medical education being spent within the setting of the teaching hospital), the irrelevance of the training to the health needs of the community, the increasing trend towards specialisation and acquisition of postgraduate degrees, the lack of incentives and adequate recognition for work within rural communities and the attractions of the export market for medical manpower are some of the factors which can be identified as being responsible for the present day aloofness of medicine from the basic health needs of our people. The relation of medical education to the social framework of the community is largely brought out towards the end of the students' period of formal training and medical education continues to postpone, rather than prepare, a doctor for the practice of medicine in the community. A vacuum separates the health centre and the doctor from the village and the people and the critical health needs of people remain largely unmet. The greatest challenge to medical education in our country, therefore, is to design a system that is deeply rooted in

the scientific method and yet is profoundly influenced by the local health problems and by the social, cultural and economic settings in which they arise. We need to develop methods and tools of instruction which have relevance to the resources and cultural patterns of each area. We need to train physicians in whom an interest is generated to work in the community and who have the qualities for functioning in the community in an effective manner. In addition to medical skills, they should be trained in managerial skills and be able to improvise and innovate.

Objectives of Undergraduate Medical Education

7.04 If these far-reaching reforms are to be carried out several basic issues will have to be discussed in depth and appropriate decisions taken thereon. The first relates to the objectives of under-graduate medical education. Whether it is the training of a physician or an auxiliary, the principles of educational science should find increasing application in the educational process. Goals of education must be clearly defined at the outset. Appropriate instructional methods must be selected and the curriculum constructed and duration determined to enable these goals to be accomplished. The outcome should be evaluated by the use of appropriate criteria to see if the desired change in the functional behaviour of the student had in fact taken place.

7.05 There is a definite need to define the skills that a doctor should have and the qualities that he should possess. The 'Basic Doctor' was defined in the report of the Medical Education Conference held in New Delhi in 1970. The objectives of under-graduate medical education that are appropriate for developing countries have been set out in the WHO Inter-Regional Conference on Medical Education and in numerous other Conferences dealing with medical education. The language, sequence, mode of presentation, and relative emphasis vary from statement to statement but they all have a fairly common core. We do not propose to attempt a full and detailed statement on this subject. We are, however, convinced that whatever the form in which the objectives of undergraduate medical education may come to be ultimately formulated, one thing is certain: the over-riding objective of the under-graduate medical courses should be to give a positive community orientation to the entire programme. It is from this point of view that the several recommendations made on the subject by earlier committees and conferences will have to be judged and the several experiments now going on in the field will have to be evaluated.

Pre-medical Education

7.06 The curriculum of undergraduate medical education will depend, not only on the objectives of the undergraduate medical

education, but also on pre-medical education which determines the level of preparation at which students will enter the under-graduate medical course. In our opinion, premedical education should aim at a balanced education in humanistic and scientific studies in order to generate continued interest in the phenomenon of living organisms. Its objectives cannot be divorced from those of medical education itself. The two years of continuous study of pre-medical science after ten years of school as envisaged in the new pattern of school education should result in a better and more closely integrated pre-medical education. The basis of medicine lies in biology and it should be taught as a dynamic, multilateral and comparative science ranging from the molecular level to that of individual human beings, communities and populations. Physics and Mathematics are closely allied to one another and their function is to facilitate precise and accurate habit of thinking. Chemistry is an experimental science and students must be encouraged to make observations on problems rather than observe set demonstrations. The early specialization at secondary school level in vogue until now led to serious inroads into the time available for liberal education in humanities and behavioural sciences. Medicine is practised not in a world bounded by science alone but in one in which, economic, cultural social influences play an important role. The study humanities should provide the student with an intelligent understanding of his past and of the great ideas that have moulded human civilisation. The content of premedical education should thus be deeply embedded in the framework of natural sciences, humanities and social sciences. We are also of the view that pre-medical education should be provided by the Universities in consultation with the authority to coordinate and determine standards in medical and health education. It should not be provided in medical colleges.

Curriculum of Undergraduate Medical Education

7.07 We do not propose to discuss the curriculum of under-graduate medical education in detail because considerable useful material on the subject is already available. We would, however, invite attention to some important considerations in this regard. For instance, major challenge before medical education for quite a few years will be, as stated earlier, to give a community orientation to undergraduate medical education and to equip the entire system of medical education in adequately for the purpose. The teaching of community medicine has therefore, to become a joint endeavour of the whole faculty and not merely a responsibility of the Department of Preventive and Social Medicine. The Department of Preventive and Social Medicine itself will have to be broadened in concept and extended in operational aspects. It will be necessary to provide it with both rural and urban field practice

areas in which active health service programmes are in operation and which will be fully utilized in the implementation of the educational programme of community medicine. There should be an emphasis on the teaching of nutrition, maternal and child health, immunology and infectious diseases, and reproductive biology and family planning. The curriculum should also reflect the application of some of the principles of educational science, namely encouraging the students to learn by themselves, introduction of a system of continuous assessment of student learning, objective methods of assessment, small group teaching, integrated interdisciplinary teaching, and accent on the experimental method. The development of such a new programme will involve, not only a radical revision of the existing curricula, but also appropriate preparation of teachers, the production of effective teaching and learning materials, the adoption of suitable methods of teaching and evaluation, the creation of the necessary physical facilities in all medical colleges and consequent reform of the hospitals attached to them. This is a programme that will obviously need sustained implementation over the next few years on the basis of a clearly formulated policy supported by adequate authority, funds and continuous evaluation.

Duration of Under-graduate Medical Course

7.08 Certain issues have now become irrelevant to the discussion of the problem of duration. For instance, it need no longer be linked up with the problem of producing an adequate number of doctors for rural areas. There are immense socio-economic issues involved in getting doctors to settle in rural areas. While these should be squarely faced and sustained efforts made to overcome them, it is idle to hope that a mere reduction in the course would achieve the result. Similarly, there is hardly any sense in suggesting the reintroduction of the diploma or licentiate course for meeting the needs of rural areas. With the type of reorganisation of the health services that we have proposed earlier, what we need, even for rural areas, is a better trained doctor rather than a less trained one. All things considered, we strongly feel that there is no justification to make any change in the present policy of producing an adequately trained general practitioner, both for rural and urban areas. Nor should financial considerations be allowed to outweigh academic needs and standards in medical education should not be diluted to save funds. It may prove to be a costly and unwise economy in the long run.

7.09 But even on good academic considerations. We do feel that it is possible and desirable to reduce the existing duration of the course by six months to one year yet ensure an improvement in standards. Several suggestions to this end were put before us. We do not propose to discuss them in detail and it would serve the

limited purpose we have in view to highlight a few major points that arose in our discussions of the problem. For instance, we should emphasize, not the duration of the course but the production of the right type of doctor which is the crucial issue. We do not produce the right type of the doctor even with this long duration and a mere shortening (or lengthening) of the course will not, by itself, produce the basic doctor. There is also the danger that short-sighted administrators may implement this recommendation on financial grounds and without implementing the others with which it is indissolubly linked so that the bad situation which exists at present will only become worse confounded. Above all, this is not a recommendation which can be implemented in isolation (it is related intimately to the restructuring of pre-medical education, definition of the goals of under-graduate education, revision of curricula, provision of adequate facilities in medical colleges, etc.) and an adequate organization to watch carefully over its implementation.

Internship

7.10 The internship plays a very important part in the consolidation of skills and the knowledge gained by the medical students. It was with this intention that it was introduced as a regular feature of the under-graduate medical course. All committees have endorsed the need to continue internship training. The Medical Education Committee went even further and recommended that as long a period as of six months (out of a total internship period of one year) should be spent in community health centres. The actual experience of the programme of internship is, however, bitter; and it is agreed by all concerned that the internship training as it is now being practised is a waste of the most critical period of the young graduates life, everyone is dissatisfied with it. The teachers tend to feel that the interns who have already passed out of the medical education system are a burden upon them and they devote more of their time to the undergraduates and to postgraduate and research students, if any, working under them. The position of interns in the teaching hospitals which abound with house-surgeons and post-graduate students is also very tenuous. The interns themselves feel that the period of internship has somehow to be got over before they either go to practice or join the teaching hospital as a house surgeon for further specialization. The situation is untenable and needs early remedial action.

7.11 We seriously debated the advisability of doing away with the internship period but came to the conclusion that, even after a modified curriculum involving community teaching is brought into full force, the period of internship which enable an undergraduate to acquire experience and to mature from a fledgling to

a fully-grown medico is absolutely necessary. What is needed, therefore, are steps to ensure that this period is fruitfully utilized.

7.12 We recommend that the training of the interneer should not be carried out in the teaching hospitals of the medical colleges but in the district Sub-divisional and taluka/tehsil hospitals which should be used as the out-reaches of the medical colleges for entering into the community. At the end of the formal under-graduate course (in fact even before it ends), groups of undergraduate students should be earmarked for being trained at selected taluka/tehsil/sub-divisional and district hospitals where proper facilities are known to exist. Such hospitals should also take on selected communities within their catchment areas whose care would be the responsibility of the interns under the supervision of that particular hospital. The doctor incharge of such hospital, the interns attached to that hospital along with staff of the Department of Community Medicine of the Medical college, should practise community medicine in such selected communities. In addition, the interns should be given practical training in curative and hospital practise under the guidance of the taluka/sub-divisional/district hospital doctors. For this purpose, the facilities available at such hospitals should be strengthened where necessary. We would also caution that this linkage should not involve all the departments of the medical college at once. It should first be tried at in the Department of Community Medicine. Once these links are established in respect of the Department of Community Medicine, they can later be strengthened and also developed in respect of other specialized departments and faculties.

7.13 It is our view, therefore, that the internship period should be fully spent in the district/sub-divisional/taluka hospitals with occasional forays into the community through the primary health centres. We also think that internship training should focus on the doctor as a member and leader of the health team, the importance of continuous care, handling of emergencies, the care of combined preventive and curative services to the individuals the family and the community, MCH and Family Planning Care, the identification of entry points for family planning community involvement and the role of the physician as a health educator.

7.14 The utilisation of the district sub-divisional and taluka/tehsil hospitals for internship training and development of their linkages with the medical colleges will not only improve the quality of health care and referral provided at these places but will also act as a pace-setter for decentralisation of medical education and development of district hospitals in the foreseeable future as centres for imparting of medical education, thus enabling a movement away from the urbanized concept of medical education. The existing medical colleges can then be used more profitably for postgraduate specialisation and development of courses.

of training in respect of various categories of para-medical and technical personnel needed in the health field. In the internship training as suggested by us above, we would also like to attach the greatest importance to the desirability of associating general practitioners of good standing and experience in the training of undergraduates.

7.15 We consider that the desirability of continuing both the internship and first year Junior Residency as organized at present needs careful study. A view has been expressed that educational ends will be better served if either one or the other is retained but not both.

Continuing Education

7.16 In the system of medical education prevalent today, any doctor who goes out of the system of the medical college has little opportunity to come back to update his knowledge and skills; and no facilities exist outside the system of medical education to achieve this objective. It is, therefore, essential to make adequate provision for the continuing education of doctors in the medical pool of the country. In the modern world where a virtual explosion of knowledge is taking place in most sciences and the existing stocks of knowledge are being doubled every seven years or so, a programme of continuing education assumes immense significance.

7.17 By continuing education, we mean the training of a physician, not with a view to gaining additional degrees or diplomas, but with a view to assisting him to maintain and extend his professional competence throughout his life. The basic problem of continuing education for physicians cannot be solved without fundamental changes in the pattern of undergraduate medical education. The implementation of these changes will necessarily take time. But in the meanwhile, the pressing problem is one of arranging continuing education for those who have already been trained in a system that was not conducive to the development of proper attitudes for continued life-long learning. Continuing education for physicians must concern itself with those issues that are of deep significance to the health of the community and also with educational activities for mixed teams of health workers. Inter-professional education is of critical importance for the members of the health team to learn together how to solve problems. It is, therefore, necessary to develop an organisational pattern for the continuing education of physicians, whether they be serving in Government or in private, as joint activity between the medical college, the professional associations and the health service.

National System of Medicine

7.18 A reference has already been made to the need to evolve a national system of medicine for the country by the development of an appropriate integrated relationship between modern and indigenous systems of medicine. We recognize the significance of the issues involved for the development of a comprehensive plan of health services suited to our needs and aspirations although, for want of time, it has not been possible for us to go into details.

Medical Manpower

7.19 Problems of medical manpower needs have not received adequate attention. The number of admissions to medical colleges and the number of medical colleges themselves should be based on a sound policy of Health Manpower Development which, in its turn, should be related to the health needs and national resources. Urgent steps need to be taken to generate such a policy along scientific lines on a national basis. For the present, we are of the view that there is no immediate need for increasing the number of medical colleges admissions. On the contrary, attempts should be made to reduce the admissions to the existing medical colleges so that the teacher: students ratio and quality of education may improve. Similar exercise have also to be undertaken for all other categories of medical manpower. Needless to say, such exercises in forecasting manpower needs and adjusting the system of medical education to them are continuous rather than one-shot affairs.

Content, Structure and Process of Educational Change

7.20 There are three ingredients of every educational change:

- content or a determination of the type of change we need;
- structure or the creation of a machinery which is charged with the responsibility of bringing about the needed change; and
- process or the initiation of the actual process of the educational change needed and nursing it to grow till our main objective of bringing about the needed change is realized.

What is happening at present in education is that everyone is busy about the content of change or about determining the type of changes we need. We have no dearth of ideas on the subject and if all the recommendations made by educational committees and commissions were put one after another, instead of going

round and round in circles as they often do, we may have a ladder stretching from the earth to the moon. On the other hand, little attention is given to the more important question of creating appropriate structures for educational change although everyone knows that, without the existence of the structures, no planned educational change can be brought about. What is worse, hardly any attention is paid to the most important question of initiating the needed change processes and of carefully nursing them to grow.

7.21 The story of developments in medical education is not any different from that of developments in general education as a whole. We have been able to identify the basic issues in the reform of medical education such as:

- determination of the objectives of undergraduate medical education and especially the overwhelming need to give a community orientation to it;
- revision of curricula, production of learning and teaching materials, adoption of suitable teaching methods, examination reform, improvement of facilities in medical colleges, preparation of teachers and such other issues for the attainment of these objectives;
- reform of hospitals attached to medical colleges and their integration into a scheme of national referral services complex;
- determination of the right duration of the undergraduate course;
- re-organisation of the pre-medical course in 10+2+3 pattern and of the programme of internship;
- the future of the first year of junior residency;
- provision of continuing education;
- post-graduate education and research;
- evolution of a national system of medicine;
- studies of medical manpower needs;

and so on. We recognize that these problems have become extremely urgent and complex and demand early and satisfactory solutions. All our attention in the last few years has, however, been devoted mainly to defining the content of change and we have any number of excellent recommendations from all sorts of *ad hoc* bodies. It is time we realize that a mere discussion of the content of change, however continuous and learned cannot bring

about the educational change we need may even confuse the issues. The fact is that there is no structure to bring about the needed changes and, in the absence of the structure, the question of initiating the change process does not even arise. In a situation of this type, we see little purpose in producing one mere learned report and in making yet another series of pious and well meaning recommendations on the content of the reform of medical education. We may do it as well as or as ill as any other group of seven persons and the exercise will meet the same fate as that of earlier attempts on the subject. It is, therefore, of the utmost important that a suitable structure or an organisational framework should be established which is charged with the task of implementing the needed reforms and of initiating and nursing the change process. We are thus convinced of the need for the establishment of a UGC-type body for medical education and reaffirm the recommendation made on the subject by the Education Commission (1964-66). In the absence of some such machinery with the authority and resources to implement the desirable reforms, we are afraid that the quality and relevance of medical education may continue to remain as a no man's land between the Centre and the State; and without such a structure, there is no possibility of initiating a change process to ensure that medical education advances to keep pace, not merely with advances in medical knowledge and technology, but also with the needs and priorities of national health.

7.22 Several other equally weighty considerations can be advanced in support of this proposal. We have already shown that the organisation of a national programme of comprehensive health services cannot be attempted unless the entire pattern of medical education is overhauled and that this, in its turn, cannot be attempted, in the absence of an organisation, with adequate authority and funds, to decide the complex issues involved and to implement the decisions through a vigorous and sustained programme of action. The coordination and maintenance of standards in higher education (including general, agricultural engineering and medical education) is a constitutional responsibility of the Government of India. Institutional and financial arrangements to give effort to this responsibility have been made under the UGC (for general education), ICAR (for agricultural education) and the AICTE (for engineering education). The important field of medical education has unfortunately no such arrangements; and the neglect of this constitutional responsibility of the Centre all these years is absolutely indefensible. The case for the creation of a structure for the reform in medical education is further strengthened by the failure of all earlier attempts to reform medical education through report after report, and recommendation, of committees, conferences, working groups, seminars and the

like. Let us not forget that the reform of medical education is not a oneshot affair. It needs continuous reaction between the output of the system and its management, between the Centre and the States, and between Universities and institutions of medical education. No such reaction is possible unless there is a suitable structure charged with the responsibility of reforming medical education in all its aspects.

The Medical and Health Education Commission

7.23 We, therefore, recommend that immediate steps should be taken to setup, by an Act of Parliament, a Medical and Health Education Commission for coordination and maintenance of standards in health medical education. It should be broadly patterned after the UGC with a whole-time Chairman who should be a non-official and a leading personality in the field of health services and education. The total membership should be between 9 and 15, one-third representing the Central and State Governments and the universities, one-third representing the various national councils and one-third consisting of leading persons in the field of health and medical education and services. Its role should be promotive and supportive and it should be responsible for planning and implementing the reforms needed in health and medical education. It should have the necessary administrative machinery and steps should also be taken to place substantial resources at its disposal in the Fifth Five Year Plan so that it can start vigorously and become effective.

7.24 We have deliberately used the term "Medical and Health Education Commission". Let us not forget that, in the totality of health services, the doctor is the most important but not the sole functionary. Equally important are a variety of para-medical personnel who constitute important links of the health service. The nurse, the pharmacist, the technicians in the field of laboratory services such as X-ray, pathology or microbiology form the essential back-up of medical care. The dentists provide a specialised service in an important and related field. Any programme of training that aims at improving the quality of medical care or restructuring of the system of medical education towards community care, must recognise the need of assessment of the educational needs of all these other categories of medical and para-medical personnel. What we need, therefore, is an organisation, not only for the reform of the undergraduate or even the whole of medical education, but an organisation which will be responsible for the reform of the entire field of health and medical education in all its aspects.

7.25 It is for this reason that we are propagating that Medical and Health Education Commission shall have on it the representatives of all the relevant national councils and that it will also

work in close collaboration with all of them. The oldest, largest and the most important of these is the Medical Council of India. The others include the Dental Council of India the Pharmacy Council of India and the Nursing Council of India. We would like the prestige, authority, and the good-will of all these Councils to be fully utilized for purposes of bringing about an early and effective reform of medical and health education. As everyone is aware, the organisation of all these Councils leaves a good deal to be desired, especially because they were originally set up only to exercise an indirect regulatory function while we are now proposing to vest them with promotive and supportive functions as well. We, therefore, recommend that the Government of India should open negotiations with all those Councils and amend their Acts, especially with the purpose of making them operationally more viable and efficient to discharge the regulatory, promotive and supportive functions for the improvement of medical and health education. We would also appeal to all these Councils to cooperate with the Government in this programme. In particular, each Council should be required to set up an education panel on prescribed lines and the Medical and Health Education Commission should be under a statutory obligation to implement its programmes of reform and also to operate its financial powers in consultation with the panel of the concerned Council. This will make full use of all the prestige, authority, goodwill and expertise of all the existing Councils and strengthen the hands of the proposed Medical and Health Education Commission in functioning as an apex coordinating organisation and in implementing a radical programme of reform in medical and health education.

7.26 We would like to make it clear that the regulatory functions which are now being exercised by the Councils will continue to vest in them unchanged. In addition, they will also take on the responsibilities of advising the Medical and Health Education Commission on promotive and supportive measures in their respective fields.

7.27 It is our considered opinion that the most important step now needed is to establish the Medical and Health Education Commission. It will be the responsibility of this Commission to then start the process of change and to nurse it to grow. The sooner this basic reform is implemented, more the better it will be for the future of health and medical education and all that will follow therefrom.

SUMMARY OF RECOMMENDATIONS

8.01 For convenience of reference, our main recommendations are briefly summarised in the paragraphs that follows.

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A nation-wide network of efficient and effective health services :

8.02 A time has come when the entire programme of providing a nation-wide net work of efficient and effective health services needs to be reviewed *de novo* with a view to evolving an alternative strategy of development more suitable for our conditions, limitations and potentialities. We recommended that Government should undertake the task of evolving a national consensus on the subject. The general principles stated in paragraph 2 of the report for the development of this network of health services may be taken as a basis for consideration in this effect.

Para-professional or Semi-professional Health Workers in the community itself

8.03 We recommended that steps should be taken to create bands of para-professional or semi-professional health of the workers from the community itself to provide simple promotive, preventive and curative health services which are needed by the community. They will include dais, family planning workers, persons who could provide a simple curative service, and persons trained in promotional and preventive health activities, including the control of communicable diseases. They need not be multipurpose. The young persons in the community, elementary school teachers, and particularly educated and willing housewives would be the pool from which these workers could be drawn. There is no need to regulate their numbers nor to form them into a cadre and pay them a remuneration from public funds. It would be desirable to leave them to work on a self-employment and part-time basis. The responsibilities of Government in their regard will be to make careful selection, to provide training and re-training, and guidance and counselling (including periodical evaluation), and supply materials needed at reasonable prices. The Director General of Health Services should be requested to work out all the details of the programme during the current year and it should begin, as a centrally-sponsored scheme, in 1976-77. A fairly large part of the country should be covered by the scheme before the end of the Fifth Plan and the entire country should be covered by the end of the Sixth Plan.

From the Community to the PHC :

8.04. Between the community (and the local para-professional semi-professional or professional health workers within) and the PHC, we should develop two cadres health workers and health assistants.

- (1) At present, there is a male health worker for every six-seven thousand population and one female health worker for every ten thousand population. The proposed target for the Fifth Five Year Plan is to have a male and

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a female worker each for a population of eight thousand. We recommend that, by the end of the Sixth Plan, we should strive to provide one male and one female worker each for every 5,000 population. We also recommend that every health worker should be trained and equipped to give simple specified remedies (including proven indigenous remedies as well) for day-to-day illness.

- (2) Between the health workers and the PHC, there should be a new cadre of health assistants. We should strive to provide one male and one female health assistant for two male and two female health workers respectively. The existing multipurpose supervisors should be incorporated into this cadre after suitable training and it should, in future, be treated as an incentive and promotional cadre for health workers. The health assistants should be invariably located at the sub-centres and not at the PHC. Like the health workers, they should also be trained and equipped to give specific remedies for simple day-to-day illnesses. While they have a supervisory role, they should also function as health workers in their own areas and carry out the same duties and responsibilities, but at a higher level of technical competence.
- (3) The PHC itself should be strengthened by the addition of one more doctor, especially to look after maternal and child health services and one nurse. The existing allotment of Rs. 12,000 earmarked for the purchase of drugs at each PHC is inadequate and should be increased. The possibility of utilising the services of senior doctors at the medical college, regional, district or taluka hospitals for brief periods of work (say two years at a time) at the PHC level should also be explored.

The Referral Services Complex

8.05. We recommended that the Primary Health Centres, as well as the taluka/tehsil, district, regional and medical college hospitals should each develop living and direct links with the community around them as well as with one another within a total referral services complex. This linkage can best be secured through a properly organised internship programme. The way in which the internship programme is organised at present is wasteful. We recommend that, for purposes of training the interns the district, sub-divisional and taluka/tehsil hospitals should be used as the out-reaches of the medical colleges for entering into the community and the programme itself organised on the broad

lines indicated in paragraphs 7.10-13. We attach great importance to the desirability of associating general practitioners of good standing and experience in the training of under-graduates. The desirability of continuing both the internship and the first year of the junior residency as organised at present also needs examination.

Establishment of Medical and Health Education Commission

8.06 There are several important issues in medical and health education which need discussions in depth and decisions and what is even more important, immediate, vigorous and sustained implementation. These include: the determination of the objectives of under-graduate medical education and giving a positive community orientation to the entire programme; the re-organisation of pre-medical education in the 10+2+3 pattern; provision of the under-graduate curriculum including the preparation of teachers, production of teaching and learning materials, adoption of suitable methods of teaching and evaluation, the creation of necessary physical facilities in all medical colleges and consequent reform of the hospitals attached to them; determining the duration of the course and reducing it, if possible, by six months to one year, even while improving the standards; reorganisation of the internship programme and of postgraduate teaching and research, continuing education; and studies of medical and health manpower needs; evaluation of a national system of medicine; and so on. No useful purpose would be solved by continuing an endless debate on the content of these reforms. What is needed most is the creation of a suitable structure, with adequate administrative machinery and funds at its disposal, and to charge it with the responsibility of determining and implementing a radical programme of reform in medical and health education in the years ahead. From this point of view, we recommended that the Government of India should, under an Act of Parliament, immediately set up a Medical and Health Education Commission for coordination and maintenance of standards in medical and health education.

8.07 The Medical and Health Education Commission should be broadly patterned after the UGC with a whole-time Chairman who should be a non-official and a leading personality in the field of health services and education. The total membership should be between 9 and 15, one third representing the various National Councils and one-third consisting of leading persons in the field of health and medical education and services. Its role should be promotive and supportive and it should be responsible for planning and implementing the reforms needed in health and medical education. It should be provided with the necessary administrative machinery and steps should be taken to place substantial resources at its disposal in the Fifth Five-Year Plan.

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8.08 The Medical and Health Education Commission should function as an apex coordinating agency and in close and effective collaboration with the National Councils. For this purpose, the Government of India should open negotiations with all the Councils and amend their Acts, especially with the purpose of making them operationally viable and efficient to discharge the regulatory, promotive and supportive functions. We also appeal to all these Councils to cooperate with the Government in this programme. In particular, each Council should be required to set up an education panel on prescribed lines and the Medical and Health Education Commission should be under a statutory obligation to implement its programme of reform in health and medical education and also to operate its financial powers in consultation with the panel of the concerned Council. This will make full use of the prestige, authority, good will and expertise of all the National Councils and strengthen the hands of the Medical and Health Education Commission in implementing a radical programme in Health and Medical Education.

APPENDICES

APPENDIX II

Recommendations of various Conferences/Committees and Papers, Memoranda, etc. received from various Individuals, Associations, etc., considered by the Group

(a) *Recommendations of various Conferences/Committees.*

1. Relevant recommendations from the Bhore Committee Report—1946.
2. Recommendations made at the Conference on Medical Education—1955.
3. Recommendations made at the Conference on Medical Education—1955.
4. Recommendations made at the 1st Conference of Deans and Principals of Medical Colleges in India—1960.
5. Relevant recommendations from the Mudaliar Committee Report—1961.
6. Recommendations made at the 2nd Conference of Deans and Principals of Medical Colleges in India—1962.
7. Recommendations made by the Chadha Committee for the strengthening of health services in the Malaria Maintenance Phase—1963.
8. Recommendations of Mukherjee Committee Report on Strengthening of Health Services—1966.
9. Recommendations made at the 3rd Conference of Deans and Principals of Medical Colleges on Under-graduate Medical Education—1967.
10. Recommendations made by the Mudaliar Committee on maintenance of a High Standard of Preparatory training in the Pre-medical course—1967-68.
11. Recommendations made by the Medical Education Committee in its Report of 1969 which were modified or enlarged at the Medical Education Conference held in 1970 and finally accepted by the Government of India in its Resolution of 8-10-1970—1970.
12. Recommendations made by the Kartar Singh Committee on Multi-purpose Health Workers—1973.

(c) *References, memoranda, papers, etc., received from various associations, individuals, etc.:*

1. Anand, D.
Professor of Preventive and Social Medicine, Jawaharlal Institute of Post-graduate Medical Education and Research, Pondicherry.
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2. Association, Indian Medical Pamphlet No. 37 of 8-4-74.
Suggestions regarding changes in medical Education.
3. Association, Trained Nurses of India
Memorandum opposing the new cadre of Health Association.
4. Banerjee, D.
Jawaharlal Nehru University, New Delhi
An article on Social and Cultural Foundations of the Health Services System of India.
5. Bisht, D.B.
Principal, Jawaharlal Institute of Post-graduate Medical Education and Research, Pondicherry.
Note on approach to the training of medical students suited to Indian conditions.
6. Chaudhry, S. M.
Maulana Azad Medical College, New Delhi.
Suggestions on changes in medical Education.
7. George, G. M.
Trichur.
Opposition to Health Assistant Cadre. Suggestions on reduction in MBBS course and opening of new medical colleges.
8. Ghoshal, B. C.
A.D.G. (HA),
Directorate General of Health Services, New Delhi. (formerly DAD) (CH)
Report on the activities of Chittaranjan Mobile Hospital prepared at the end of the 4th Plan.
9. Health & Family Planning Ministry of India
Views of the Group on the suggestions for National Services for a specified period as a precondition for the grant of a degree.
10. Kasliwal, R.M.
Jaipur.
Suggestions regarding training of Health Assistant
11. Kumar, Sharad
Deputy Director General (Medical), Directorate General of Health Services.
A note for rationalisation of undergraduate medical curriculum in the Indian Medical Colleges.
12. Mathur, P. D.
Jaipur.
Suggestions for improvement teaching in medical colleges.
13. Murthy, T. S.
Warangal
Support for Health Assistant cadre and proposal to reintroduce BSc. (PH) school at Warangal if Central Assistance is forth coming.
14. Naik, J. P.
Member of the Group.
Papers relating to a seminar on the problems of training Medical and Health Personnel in 1975.
15. NIAHE
Report of the Task Force on Operation Research for improved delivery of Health Services (1974).

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| 16. Nayan, Sushila
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| 19. Ramalingaswami, V. V.
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APPENDIX III

Training of Health Assistant

Venue of training.—Since the Health Assistant will be working primarily in the rural setting, a large part of his training should take place in that environment. Appropriate experience is necessary in rural hospitals, in demonstration and training health centres and in small rural dispensaries. Thus the Health Assistants by working under close supervision in these institutions will be prepared for work that may be less supervised. During his training the Health Assistant should spend more time in practical field work rather than in the class room.

The Health Assistant should be trained in Government institutions.

Outline of the curriculum.—Curriculum for Health Assistants as well as curricula for existing Health Supervisors to qualify for Health Assistant after an orientation course as well for regular training of new entrants have been framed after a detailed study of the course contents of training for the current categories of health workers and also proposed course contents for basic health workers. Health Assistants and other such categories of workers available in the field.

FUNCTIONS OF THE HEALTH ASSISTANT

1. Curative :

- (a) first-aid in medical and surgical emergencies ;
- (b) diagnosis and outpatient treatment of common diseases, major surgery in sub-centres ;
- (c) referral to the primary health centre of emergencies and cases requiring hospitalisation ;

2. Public Health Functions :

- (a) to carry out all functions required of the public health services and family planning and maternity child welfare services ;
- (b) immediate initiation of epidemic control measures ;
- (c) initiation and supervision of vaccination and preventive measures for communicable diseases ;
- (d) school health and related activities, including nutrition and dietetics, dental and health education ;
- (e) registration of births and deaths ;
- (f) environmental sanitation, housing and latrines, disposal of sewage and refuse, safe water supply, etc. ;
- (g) regular visits to all the villages in his area for the above functions.

The Health Assistant is required to act as the first-line-of-attack against diseases arising from environmental sanitation defects.

3. Supervisory Functions :

1. The Health Assistant will exercise supervision over the area covered by the multipurpose health workers both male and female.
2. The Health Assistants will check the work of the Health Workers both male and female.

In the course of tour, the Health Assistant will ensure the regularity of visits, authenticity of records, rigid implementation of instructions, issued from time to time and maintenance of adequate standards of work by the subordinate staff.

ORIENTATION TRAINING COURSE FOR EXISTING HEALTH SUPERVISOR TO QUALIFY FOR HEALTH ASSISTANT

Total duration of training	6 months.
Institutional	4 months.
Field experiences at P.H.C.	2 months.
Total number of working hours in 4 months*	$5 \times 20 \times 4 = 400$ Hrs.

Knowledge and skills required

1. Supervision, guidance and control.
2. Store-keeping, accounting and book-keeping.
3. Treatment of emergencies.
4. Medical treatment for various common ailments at P.H.C.
5. Health administration.

Subjects to be covered :

1. Anatomy and Physiology	25 hours.
2. Microbiology, Parasitology and Entomology	30 hours.
3. Pharmacology and Pathology	50 hours.
4. Public Health Administration including store-keeping accounting and book-keeping	90 hours.
5. Treatment of emergencies and diagnosis and treatment of common diseases	80 hours.
6. Hospital and casualty posting	100 hours.
7. Environmental sanitation	25 hours.
8. Examination, etc.	20 hours.

*Five hours a day and twenty days in a month, ten days being allowed for Sundays, holidays and monthly tests.

REGULAR TRAINING COURSE FOR HEALTH ASSISTANTS FOR NEW ENTRANTS

Minimum qualifications for admission	*Higher Secondary pass examination or its equivalent with medical group of subjects and mathematics.
Total period of training	2 years.
Period of institutional training	1 year.
Period for field posting (internship)	6 months
No. of working hours in one day	5 hours
No. of working hours in one month	$5 \times 20 = 100$ hours
No. of working hours in one semester 6 months	$100 \times 5 = 500$ hours.

1st and end semester (1000 hours) training in basic sciences,
Lab-procedures and health organisation practices.

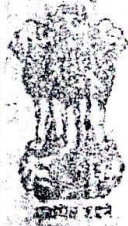
3rd Semester (500 hours) for training in first-aid and treatment
of minor ailments.

Details of subjects and topics with time distribution (didactic and practicals):—

1. Introduction 20 hours.
2. Basic sciences and lab. procedures Anatomy, Physiology, 100 hours.
Microbiology, Parasitology and Entomology, Pathology
and Pharmacology.
3. Health Services Administration 100 hours.
4. Control of communicable diseases and epidemiology and 80 hours.
national programmes.
5. Statistics, social sciences and research methodology (data 105 hours.
collection, compilation, tabulation and presentation).
6. Environmental sanitation 75 hours.
7. M.C.H. 100 hours.
8. Growth and development 20 hours.
9. Nutrition and nutritional programmes 50 hours.
10. School Health 20 hours.
11. Industrial Health 20 hours.
12. Health education 75 hours.
13. Family Planning and Population education 100 hours.
14. Nursing techniques and arts 40 hours.
15. Laboratory techniques 50 hours.
16. Immunization and injection techniques 50 hours.
17. Examinations 50 hours.
18. First-aid and treatment of minor ailments 332 hours.

1385 hours.

*With the adoption of 10+2+3 system of education the minimum
educational qualification will become 10+2 i.e., after 12 years at the school.



**COMPENDIUM
OF
RECOMMENDATIONS
OF
VARIOUS COMMITTEES
ON
HEALTH DEVELOPMENT
1943-1975**

Issued by

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DIRECTORATE GENERAL OF HEALTH SERVICES
MINISTRY OF HEALTH AND FAMILY PLANNING
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**VI-REPORT OF THE STUDY GROUP
ON MEDICAL CARE SERVICE
(AJIT PRASAD JAIN COMMITTEE)**

REPORT OF THE STUDY GROUP ON MEDICAL CARE SERVICES

(AJIT PRASAD JAIN COMMITTEE)

SUMMARY OF RECOMMENDATIONS

ORGANISATION OF MEDICAL FACILITIES

1. In order to develop institutional facilities the following pattern is recommended to be attained by 1971 :—

Teaching Hospitals	500	(to be increased according to the number of students).
District Hospitals	200	(may be raised up to 300 beds depending on population).
Tehsil/Taluq Hospitals	50	(may be raised depending on population).
Primary Health Centres	6	(may be increased to 100 depending on needs).

2. The bed strength of 125 districts which have at least one 200 bedded hospital may be raised to 300 depending on the population served. In the remaining 210 districts hospitals, having less than 200 beds, the strength should be raised to a minimum of 200 beds. Ordinarily the distribution of these beds should be as under :—

Medical	60
Surgical	40
Gynaecology and Obstetrics including Maternity	35
Paediatrics	15
Orthopaedics	5
Eye	10
E.N.T.	10
Skin	5
Emergency	5
Isolation	10
Psychiatry	5
	<hr/>
	200

3. Since the district hospital is to serve as a referral centre it should provide specialist services in Medicine, Surgery, Obstetrics, Gynaecology, Eye, E.N.T., Paediatrics, Dentistry, Psychiatry, V.D. The T.B. Clinic at the district headquarters, where it exists should work in close liaison with the district hospital and the medical officer of the clinic should work as T.B. specialist to the district hospital.

4. Each of the 947 tehsils/taluqs, which do not have hospitals at present, should be provided with one hospital each with a minimum bed strength of 50. In other tehsils or taluqs, where the bed strength is less than 50, it should be raised to a minimum of 50. The distribution of beds should generally be; Medical = 20, Surgical = 15. Maternity and Gynaecology = 10 and Isolation = 5 beds. The tehsil/taluq hospital should be provided with three medical officers, one each for the three basic specialities i.e. Medicine, Surgery and Gynaecology and Obstetrics. The doctor-in-charge of Gynaecology and Obstetrics should preferably be a woman. She can also take charge of Maternity and Child Health work and Family Planning.

5. At Primary Health Centres, of the six beds recommended, 4 should be for maternity cases and the bed strength could be raised to ten depending on the needs.

6. The present number of beds viz. 3,18,000 should be raised to 4,20,000 in 1971 and to 6,30,200 beds in 1976, bringing the bed-population ratio from 0.61 per thousand of population as at present to 0.75 in 1971 and one bed per thousand of population by 1976.

7. A regular system of giving liberal grants-in-aid to voluntary and charitable organisations to open new teaching institutions and other institutions for giving medical care and service should be instituted on non-restrictive basis.

8. In order to make full utilisation of the beds available in hospitals/Primary Health Centres, the following measures are suggested :—

- (a) When a patient no longer needs the specialised medical care of a regional or a district hospital he should be sent back to the tehsil/taluq hospital or the Primary Health Centre nearest to his residence for general treatment.
- (b) Convalescent homes may be set up where chronic and incurable patients may stay on nominal payment and in case of indigent persons free of charge.
- (c) Medical Inns may be set up in the vicinity of bigger hospitals, preferably by private bodies, where patients and their relatives from mofussil areas may stay on payment during the period of diagnosis; and
- (d) Specialist, laboratory and diagnostic services as recommended by the Group, may be provided soon at smaller hospitals and Primary Health Centres in order to help create a climate of confidence and facilitate the working of referral system.

9. In order to provide specialist services to the people living in rural areas all teaching hospitals should be treated as regional hospitals, each serving a specified area or hinterland covering, if necessary, two to three districts. District hospitals, in areas which remain unattached to the teaching hospital, should be developed as full-fledged referral centres.

10. Cases from district hospitals should be referred to teaching hospitals, while cases from Tehsil/taluq hospitals and Primary Health Centres should be referred to District Hospitals. Primary Health Centres should refer cases to their nearest referral hospital. The referring doctor, however, may in serious cases exercised his discretion and refer the cases to the teaching/special hospital direct. Cases unless needing hospitalisation or specialised treatment should be referred back to the originating hospitals or Primary Health Centres with proper diagnosis and instructions for further treatment.

11. In difficult areas and in areas where distances are long and means of communication difficult such as hilly districts and difficult areas like Bastar, certain tehsil/taluq hospitals should be developed as full-fledged referral centres.

12. Mobile teams of specialists from district and teaching hospitals should visit tehsil/taluq hospitals and Primary Health Centres at regular intervals to advise the doctors on cases being treated there or for the transfer of cases needing specialist care to referral hospitals.

PRIMARY HEALTH CENTRES

13. The coverage of 80,000 population by a Primary Health Centre is too heavy. In practice the Primary Health Centre does not serve more than 30 to 40 thousand people living within a radius of two to four miles of the main centre and sub-centres. It is, therefore, suggested that by the year 1976 at least one of the sub-centre in the Block should be raised to the status of Primary Health Centre.

14. Medical Officers of the Primary Health Centres should be oriented in public health and training facilities for the type of staff needed should be augmented.

15. The lady doctor for the Family Planning work at the Primary Health Centre should always be in addition to the lady medical officer on health side.

16. In appropriate cases, wherever the need exists, the number of beds in the Primary Health Centre may be increased from 6 to 10.

17. Full use of specialists visiting Primary Health Centre at regular intervals should be made and the Primary Health Centre

doctor should keep such cases needing specialist treatment in readiness. Ambulance service should also be fully made use of to make the referral service successful.

18. The laboratory technician with a microscope provided at the Primary Health Centre under National Malaria Eradication Programme should be utilised to undertake simple tests like stool, urine, blood etc. of patients attending the Primary Health Centre.

19. The allopathic dispensaries functioning within the jurisdiction of the Primary Health Centre should be continued as hitherto and be treated as sub-centres to the main Primary Health Centre. In Blocks which do not have a Primary Health Centre, one of the existing allopathic dispensaries should be upgraded to the status of the Primary Health Centre and other dispensaries would function as sub-centres.

20. As an incentive to doctors to work in rural areas the provision of residential accommodation, grant of rural allowance and posting by rotation in rural and urban centres should be made a must. Efforts should also be made to improve working conditions at the Primary Health Centres to form a unified cadre of doctors in the State Government services and to provide regular training facilities to the doctors of the Primary Health Centres preferably at the district hospital.

OUT-PATIENT DEPARTMENT AND EMERGENCY SERVICES

21. The Out-patient Department should be planned to provide services for one per cent of the population of the area to be catered for. It should be located at suitable distance from the indoor wards, and be connected by a corridor to laboratory, X-ray and other diagnostic rooms. In smaller hospitals and others where sufficient accommodation is not available, the O.P.D. may be located on the ground floor and indoor wards on upper floors.

22. The Out-patient Department should be sufficiently large so as to avoid congestion. There should be a reception-cum-information counter situated at a prominent and easily accessible place in the Central Registration Hall.

23. In order to help illiterate people coming from rural areas, the Out-patient Department cards issued to patients should be in different colours and if possible the symbols of speciality like Eye, Ear, Nose, X-ray may be printed prominently to identify concerned clinical Department.

24. There should be arrangements, in the vicinity of the hospital, for stay of patients and their attendants seeking admission to hospitals for diagnostic purposes, either free or at nominal charges.

Such facilities can be easily provided by charity minded individuals or organisations. Provision of a cafeteria for patients and their attendants should also be made.

25. While planning out-patient Department provision for the treatment of at least 10% of the total number of patients expected to attend the out-patient Department should be made for emergency cases.

26. An emergency ward should be added to every hospital where a patient needing emergency service should be admitted at once and kept for 24 hours before being transferred to a regular concerned ward.

27. Ambulance service to bring patients needing emergent service should be provided at the Out-patient Department.

28. There should be separate doctors and other staff for the Emergency Department and they should work round the clock. Services of other specialists should be available at call. The services of a pathologist and radiologist should immediately be available to the Emergency Ward. In teaching hospitals there should be a separate set-up of these services.

29. The budget for drugs, medicines, instruments, equipment and dressings for the Emergency Department should be kept separate and be at least double of the needs of other corresponding Departments. Buffer stocks of drugs should be kept with the Medical Superintendent to meet the needs of the Emergency Department.

SPECIAL HOSPITALS

30. To remove disparity in the distribution of special hospitals, preference should be given to the backward States in the matter of establishment of new special hospitals and provision of additional beds in existing institutions.

31. Treatment in special hospitals should be restricted to referred cases and cases which need specialised attention of the highest order.

Tuberculosis

32. There should be no district without having at least one T.B. Clinic with a minimum of 100 beds and those having less than 100 beds should be raised to 100 beds by 1976.

33. Domiciliary treatment of T.B. should be intensified. Admission of patients in T.B. hospitals should be confined to (1) medical emergencies, (2) surgery cases, (3) sputum positive cases, and (4) cases not responding to domiciliary treatment.

34. District Tuberculosis Clinics/hospitals should run in close liaison with Taluq/Tehsil and District hospitals and T.B. Centres should be in overall control of the Superintendent of the Tehsil/Taluq/District Hospital.

35. Regular supply of anti-tuberculosis drugs to the patients attending the Tuberculosis clinics should be ensured and agency of the basic health worker working at the Primary Health Centres should be utilised to make available drugs to the patients domiciliary.

36. Before the mother is discharged from the hospital the baby should be B.C.G. vaccinated. For this adequate provision of freeze-dried vaccine should be made in maternity hospitals.

Mental Hospitals

37. By 1976 the bed strength for mental cases should be raised to 1 : 15,000. Teaching hospitals should have a psychiatric clinic (Day Hospital) with 30 to 40 beds. District hospital should have a psychiatric clinic with a minimum of 5 beds. Regional mental hospitals should be set up for a group of 8 to 10 contiguous districts. Some of the existing mental hospitals should be raised to the status of regional hospitals by increasing their strength to 300—400 beds. Initially mental cases should be treated in psychiatric clinics before being referred to teaching hospitals or to the mental hospitals.

38. The existing medical colleges should be expanded to train adequate number of doctors in mental sciences and teaching hospitals be utilised for training para-medical personnel.

39. The Indian Lunacy Act should be replaced by a suitable Mental Health Legislation.

Maternity Hospitals

40. The maternity bed recommended by the Group, namely 70 beds in Teaching Hospitals, 35 in District Hospitals, 10 in Tehsil Hospitals and 4 at each Primary Health Centre have been made on the assumption that only such cases that need hospitalisation, would be admitted in hospitals and ordinary deliveries should be done in the homes of the patients by qualified midwives.

41. Facilities and equipment for applying advance practice in the field of obstetrics and for isolating septic from clean cases in labour and for special nursing care to treat cases of toxæmia, tetanus, puerperal psychosis etc., which are now very much lacking or missing, should be made up.

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42. Training facilities for Midwives, Auxiliary Nurse Midwives and for Dais should be made at the District Hospital. The Dais should also be paid similar stipend during the course of training as to Auxiliary Nurse Midwives.

Paediatric Hospitals

43. There should be one Paediatric hospital in each State attached to one of the medical colleges. This hospital should have, in addition to general section, a number of specialised sections such as Paediatrics Haematology, Endocrinology, Neurology, Surgical Paediatrics, Orthopaedic Paediatric and Dental Services.

Cancer Hospitals

44. The existing four Cancer Hospitals at Bombay, Madras, Calcutta and Delhi should be upgraded to regional centres and operational areas attached to each of them. In addition, two more regional centres be opened one in Madhya Pradesh attached to Bhopal Medical College and another at Varanasi, or at some place in the State of Bihar.

Ophthalmic Hospitals

45. Training of specialists in Ophthalmology and provision of more beds to reach the norms of advanced countries namely, one eye specialist and one ophthalmic bed needed for 10,000 and 5,000 population respectively is an ideal, which should be achieved. The work done by voluntary agencies in certain States in the field of eye relief is appreciated and suitable action be initiated in other places also.

46. Mobile ophthalmic units, manned by the specialists of the district hospital, should hold periodic eye clinics and camps at Primary Hospital Centres. Periodic check up of eye diseases should be included as an important item in the School Health Programme.

Treatment for Leprosy Cases

47. Excellent work done for the control of leprosy by voluntary agencies and International Organisations is appreciated and they need further encouragement and financial help.

48. Special emphasis should be laid on the detection of leprosy in the School Health Programme for this age group.

49. Leprosy programme should be integrated with the Primary Health Centre and sufficient stocks of sulphones should be maintained at the Primary Health Centres who should obtain the services of a specialist at S.E.T. Centre wherever required.

Infectious Diseases Hospitals

50. The health authorities should take serious notice of the deplorable state of affairs obtaining in Infectious Diseases Hospitals. State Governments should take over the responsibilities of running Infectious Diseases Hospitals, in highly endemic areas. District Hospitals should have isolation beds where communicable diseases except smallpox be treated.

51. Cities with a population of 5 lakhs or more should have an Infectious Diseases Hospital, Primary Health Centres should provide temporary shelter to Infectious Diseases patients.

Dental Treatment

52. Fully equipped and staffed dental clinics should be set up at the District hospitals where they do not already exist. Besides the dental surgeon, the Dental Clinic should have a dental hygienist and dental mechanic. Dental care of school children should be included in the School Health Service.

Convalescent Homes and Rehabilitation Centres

53. Convalescent Homes should be set up in the vicinity of teaching hospitals for chronic and incurable patients.

54. Facilities for rehabilitation, consisting of Medical Physical therapy, Occupational therapy, Speech Therapy and Prosthetic Sections should be set up at each teaching hospital. At least one physiotherapist should be appointed at the District Hospital.

INTEGRATION OF MEDICAL AND HEALTH SERVICES

55. It is suggested that curative and preventive services, Family Planning and Maternity and Child Health work should be integrated from the highest to the lowest operational level under a single administrative authority.

56. There should be one single officer in the District responsible for curative, preventive and family planning work and he be designated as Chief Medical Officer, in place of District Medical Officer. He should have two deputies to assist him—(1) Deputy Chief Medical Officer (Health) and Deputy Chief Medical Officer (Family Planning & Maternity). The present post of Family Planning Officer may be abolished. The Chief Medical Officer will be ex-officio Medical Superintendent of the District Hospital and all other medical institutions in the District will be under his charge. All Civil Surgeons should be given three months' orientation training in public health so that they can work effectively as Chief Medical and Health Officer.

57. Medical Officer-in-charge of the Primary Health Centre should be put in full administrative control of the entire health staff and be designated as the drawing and disbursing authority with powers to grant leave to his staff.

STAFFING PATTERN AND REQUIREMENTS OF EQUIPMENT

58. The standards for hospital appliances, equipment and instruments evolved by the Indian Standards Institute should be strictly followed and no departure from these standards should be permitted.

59. Staffing pattern for a Hospital with 50, 100, 200 and 300 beds have been recommended.

60. Private practice should be permitted to all Government doctors except in the case of doctors working on the health side, doctors working on laboratory and diagnostic services, doctors serving in teaching hospitals, Civil Surgeons of the Districts and Medical Superintendent of Hospitals and doctors working on research projects. Adequate non-practising allowance should be paid to the incumbents of these posts.

61. State Governments in the case of medical men working in Directorates of Health and Medical Services and Central Government in case of medical men working in the Directorate General of Health Services should take their own decision in regard to payment of non-practising allowance depending on their resources and service conditions.

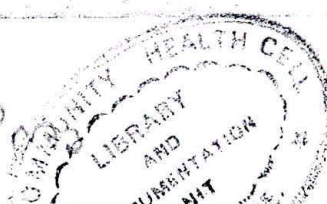
62. Doctors working in difficult and remote areas should be granted a special allowance during the period of their posting at such places.

63. System of honoraries should be continued in places where whole-time Government doctors and specialists are either not available or Government cannot afford to engage them for want of funds. The services of eminent persons who are known to be devoted to their profession and are prepared to work as honoraries, should be utilised. The honoraries should be subjected to same discipline as whole-time doctors. Their terms for recruitment and conditions of working like hours of duty etc. should be clearly laid down.

LABORATORY AND DIAGNOSTIC SERVICES

64. Laboratory services in India vary from State to State and within the States at all levels. Efforts to strengthen the services at district and peripheral levels should be made. Any potential savings by way of space, equipment, personnel and funds need to be over-looked.

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65. In teaching hospitals the set up of laboratory services should include Clinical Biochemistry, including routine examinations, Haematology including Blood Bank, Histopathology, Clinical Microbiology including Stool CSF, Pleural fluids, Serology and Surgical Pathology, Autopsy including Cytology. Each of these sections should be under the charge of a competent and well trained officer with a complement of technical staff, but the responsibility for technical standards should rest with the parent department of the College.

66. The set up at the District Hospital may include Haematology including Blood Bank, Clinical Bio-chemistry, Urine and Stool, C.S.F. Serology etc. and Microbiology. If resources do not permit, arrangements for such service may be made with the department of Pathology and Microbiology in a neighbouring teaching hospital. Laboratories at the District level should have 4 laboratory technicians, 2 laboratory attendants, a sweeper and a clerk on their staff. At the tehsil/taluq level there should be one laboratory technician and one of the doctors should, in addition to his other duties, look after the laboratory. This doctor should be deputed to a District Hospital for about 6 weeks training if necessary.

67. Non-medical graduates in Bio-chemistry or Micro-biology may be employed to do laboratory work.

68. The departmental heads in a laboratory in large hospitals should be fully qualified medical man who in addition to general training in pathology should have sufficient postgraduate experience in the speciality of the department.

69. The number of technicians in a laboratory should be fixed on the basis of 1,000 tests per fully trained technician per month as the maximum.

70. The X-ray Department should be so sited as to be readily accessible to in-patient wards, the out-patient department and the accident and emergency department.

71. Teaching hospitals should have four X-ray plants one of 300 to 500 M.A.; the second of 100 M.A.; and third a portable plant of 35—50 M.A. and the fourth a Dental X-ray Plant, besides plants or machines for Diathermy and lamps for ultraviolet and infra red. In large and busy hospitals there may be an additional miniature X-ray set.

72. In district hospitals with 200 or more beds there should be one 200 M.A. Unit, one 100 M.A. and one 35—50 M.A. portable unit and one for dental care, besides having lamps for ultraviolet and infra red. The tehsil/taluq hospitals should have one X-ray plant of 50 M.A. and lamps for ultraviolet and infra red.

73. Radiotherapy should be confined to a few selected hospitals and teaching hospitals.

74. Radioisotopes should be limited to teaching hospitals only.

ANCILIARY SERVICES

75. Supply of linen in a hospital should be the responsibility of an officer of the status of Matron or Assistant Matron who should be in-charge of the service. Central linen room is recommended.

76. Clothing supplied to patients should be simple, economical, durable, clean and suited to the climatic requirements of the place.

77. Mechanical laundry for linen in hospitals where the quantity of linen is not less than 45,000 pieces per week is considered economical, quick and involving the minimum wear and tear and pilferage. For this purpose smaller hospitals may be grouped. Hospitals in the same city may combine to have central mechanical washing. Small domestic washing machines may be used in District and Taluq hospitals.

78. Hospitals with more than 200 beds should have a whole-time dietician. In others one of the sisters should be trained in basic knowledge of diets and put incharge of dietary and food services. Trolleys insulated with saw dust and stainless steel thermo jars with a tap should be used for carrying food. Kitchen should be preferably on the ground floor and be neat, clean and spacious. Stainless utensils and gas or smokeless chullah should be used.

79. Central Sterilisation Supply Department should be organised in all hospitals with bed strength 200 or more. District Hospitals should supply sterilised materials including dressings to hospitals and dispensaries attached to them. Blankets must be thoroughly sterilised. The C. S. S. D. should be on the ground floor near the operation theatre and connected with telephone.

80. Non-store holding purchases organisation should be set up in all States to coordinate the demands of medical stores and drugs from various hospitals. Rate contracts should be settled with suppliers/manufacturers and supplies received from them directly, in larger packings and sent to the District Hospitals from where the drugs and equipment be supplied to Tehsil/Taluq Hospitals and Primary Health Centres in the district. Medicines should be stocked for a period of six months. Quality control organisation should ensure quality of drugs received from suppliers and supplied to hospitals.

81. Hospital pharmacies should be established in all teaching hospitals and tablets, injections, fluids and other common mixtures and ointments should be manufactured there.

82. To check over-medication, there should be a Committee consisting of specialists, who should meet periodically, examine cases of misuse and excessive use and prescription of medicine. A Prescribers' Journal should be started by the Government of India to begin with.

83. The basis of treatment in hospitals should be the National Formulary and the treatment should be prescribed by Pharmacopoeia or generic name and use of branded and patent medicines should be discouraged.

84. In addition to Hospital Library, there should be a Patients' Library having light reading and pictorial magazines, journals and periodicals, as well as literature on dietary, nutrition and health education material. At the District Hospitals there should be a fairly good library and doctors working in other hospitals of the district should become members and borrow books. Medical and professional journals should be made available in all hospitals and even in Primary Health Centres. A system of circulating medical and professional journals which are rare and published in foreign countries should be established. If possible extracts of important material may be got cyclostyled and circulated.

85. One or more than one workshop, depending on the size of the State to repair machines and hospital equipments should be set up. Technicians attached to these workshops should periodically visit hospitals to check up machines and repair them on the spot or bring them to workshop. Hospital authorities should send periodically a certificate to the Health Directorate that all machines and plants in the hospital are in working order and those out of order have been sent for repairs. Hospitals with bed strength of 200 or more beds should have a repairing cell consisting of one Blacksmith, one painter, one carpenter and one Electrician.

86. In Teaching Hospitals providing post-graduate medical studies records should be kept in a precise manner with indexing and preserved in bound volumes or in microfilms, where felt necessary. The cases to be recorded should be marked by the doctors. District Hospitals should adopt a simple method of record keeping. Record should be maintained on the pattern of International Classification of Diseases. In teaching hospitals there should be one Medical Record Officer, 2 Medical Record Technicians and other complementary clerical staff, while in District Hospital one Medical Record Technician and one of the Medical Officers in the hospital should be made responsible for record keeping. More teaching centres should be opened to train Medical Record Technicians.

87. All hospitals with 200 or more beds should have a blood bank. Doctors should persuade friends and relatives of patients to donate blood. Blood Banks in Teaching Hospitals should supply

blood to hospitals attached to them. These hospitals should have refrigeration facilities and dust-free accommodation for storage and equipment for blood transfusion. Blood Banks should be equipped with a utility van which should serve as a multipurpose vehicle for transporting donors, blood donation teams and social workers, and when free for propaganda purposes and for blood collection. A small committee of experts to lay down standards for the collection and storage of blood and for techniques of grouping and matching should be appointed.

88. Designs of mortuaries for different sizes of hospitals have been suggested. Cold storage arrangements should be available in district and teaching hospitals. Cold room chambers should keep a temperature of 4°C. Provision of ice in case of electricity or compressor failure should be made. The floor should be stain-proof and easily washable. Proper record for incoming and outgoing dead bodies should be maintained and whenever required the services of photographic and X-ray units should be available. Ground floor is the best location for a Morgue. It should have a suitable exit leading to a loading area concealed from the view of patients, and the public. On an average there is one death per hospital bed per year and facilities for the custody of bodies and post-mortems should be provided accordingly.

89. All out effort to inform the relatives, friends or persons who may be visiting the patient during his illness, about the death of the patient should be made before declaring a dead body as unclaimed. Unclaimed bodies may be sent to teaching hospitals for teaching and research purposes. Post-mortem need be done on legal and police cases or for pathological purposes for teaching and research. Delay in handing over the dead body on this account should be minimised to the maximum extent possible.

SANITATION AND SECURITY ARRANGEMENTS PUBLIC RELATIONS AND HEALTH EDUCATION

90. Full fledged House-keeping Cell with a qualified Sanitary Inspector, Havalgars, Sweepers, Scavengers and Gardeners has been suggested.

91. Three to four per cent of capital cost should be provided for the maintenance and repairs of hospital buildings. Restrictions imposed on account of emergency or other matters in the allotment of funds for repairs should not apply to hospitals.

92. Hospitals should have arrangements to maintain a daily supply of 50 gallons of water per bed. Drinking water in the form of water coolers should be provided in verandahs and out-patient department at suitable location. Private donations should be solicited for providing water coolers.

93. One latrine seat for every six beds should be provided in hospitals. Wherever piped water supply is available, all the surface latrines should be converted into water-borne latrines attached to the sewerage system or a septic tank. At other places water-borne non-flushing latrines should be provided with a septic tank.
94. Cooks, food servers, attendants etc. who come in contact with food should be screened and their health records maintained.
95. Regular physical verification of stores in all departments will reduce pilferages. Architects should pay adequate attention to consideration of security in the designing of hospitals.
96. A good and courteous behaviour on the part of hospital workers and doctors and the receptiveness by patients and their attendants will constitute good public relations. This cannot be strictly enforced but are to be realised.
97. In teaching hospitals, a Public Relations Officer should be appointed to look into the complaints and difficulties, bring them to the notice of the concerned officer and secure redress.
98. In the Casualty and Emergency Departments the doctor should be particularly polite and sympathetic and should spare no efforts to console the relatives and attendants of the patient. A brochure containing the "Dos" and "Don'ts" i.e. acts which he is not expected to do, should be available for the benefit of the in-patients.
99. Appointment of Hospital Advisory Committees in teaching and district hospitals is suggested. These Committees should take lively interest in the affairs of the hospital and the staff and suggest measures to add to the comforts of patients, build better relations and secure hospital support of voluntary institutions, charitably disposed persons and social workers.
100. Hospitals form an excellent nucleus for imparting health education. In teaching hospitals there should be a qualified Health Educator with medical or social science training. He should be assisted by medico-social workers trained in health education. The set-up should include a projectionist to operate the audio-visual equipment and artist-cum-photographer for preparing education aids. District hospitals should be provided with medico-social workers. The Medical Officer-in-charge of the Primary Health Centre should be responsible for health education in the Block and he should utilise the Block Extension Educator in planning education material for the Primary Health Centre.
101. The equipment for health education work for hospitals of various sizes have been suggested.

102. Adequate display of health education material, books, pamphlets and arrangements for display of short films may be made in the Out-patient Departments in hospitals.

AUGMENTATION OF RESOURCES

103. In order to augment financial resources the following measures are suggested :—

- (i) Levy of a charge of 10 paise per attendance in the out-patient departments of hospitals and dispensaries.
- (ii) A minimum charge of 25 paise per day of hospital stay.
- (iii) Payment of diet-charges by patients who have a monthly income of Rs. 200/- or above.
- (iv) Setting up of pay clinics in all major hospitals in towns with a population of five lakhs.
- (v) Provision of paying beds in district and teaching hospitals, where these do not exist.
- (vi) Extension of Central Government Health Scheme and Employees State Insurance Scheme.
- (vii) Starting of Health Insurance Scheme in selected areas or among selected groups of population.
- (viii) Contribution from the L.I.C., and
- (xi) Health Cess.

104. The revenues, raised by measures suggested above, should not go to the public exchequer but made available to the hospital concerned either directly or through an equivalent increase in its budget. Donations for putting up of hospital buildings, setting up of beds in them and for running hospitals should be encouraged.

105. Central Government Health Scheme and Employees State Insurance Scheme should be extended to uncovered population and areas. Health Insurance Scheme may be tried on pilot basis in selected areas, both among the urban and rural populations. State Governments should also initiate health insurance schemes for their employees by some banks and other organisations should be discouraged and these organisations should also start their own health insurance schemes.

106. The Life Insurance Corporation should also join hands with health agencies in their endeavour and be asked to set apart a prescribed proportion of its profits to finance the Health Insurance Scheme.

107. The levy of Health Cess as imposed in the State of Mysore may be considered by other States also as a source for raising revenues.

FAMILY PLANNING PROGRAMME IN HOSPITALS

108. All medical men, general practitioners, specialists paediatricians and others should be made to take interest in Family Planning work, and they be made aware of the urgency of the population problems, modern methods and latest research in Family Planning.

109. Family Planning Committees should be set up in all hospitals to plan and review the progress made in regard to Family Planning.

110. Family Planning services should be provided in all hospitals through Family Planning Welfare Centres and no post should be left unfilled. In teaching hospitals the Family Planning Welfare Centres should work as a part of the Department of Gynaecology and Obstetrics. These centres should also organise "Well-baby" Clinics. Occasions when women come for fitness for loop insertions or some other family planning advice, should be utilised for detection of abnormalities/disease and wherever possible proper advice given for treatment.

111. All hospitals should have facilities for sterilisation.

112. Doctors and para-medical staff who take active interest in Family Planning, a remark to this effect may be made in his character rolls. For outstanding work in Family Planning the staff may be allowed double increments in pay.

113. As for educational programmes, the Family Planning Welfare Centre should be situated at advantage point, all doctors wherever possible, should advise patients for Family Planning as part of patient's care; nurses during the patient's stay in hospitals, can educate and motivate them for Family Planning. At the time when patient is discharged from hospital, eligible patients may be clearly told the type of Family Planning advice needed and the place to be visited by them.

114. Orientation courses in Family Planning for doctors and nurses should be organised in teaching hospitals. Staff of Regional Family Planning Centres may also be involved. Family Planning should be made a subject of study in medical colleges as part of undergraduate curriculum.

CENTRAL GOVERNMENT HEALTH SCHEME

115. High priority should be given to the construction programme of dispensaries. The action on proposals (i) to have a separate Hospital for Central Government Health Scheme beneficiaries in Delhi and (ii) to set up one poly clinic for every five dispensaries to provide laboratory, diagnostic and specialist services should be expedited.

116. Much of the time spent by the patients in the dispensaries will be reduced if the Pharmacist's counter is enlarged to accommodate both the compounders dispensing special and ordinary medicines and separate timings be fixed for old and new cases and these timings are strictly enforced excepting for emergency cases.

117. Direct consultation with the specialists by beneficiaries drawing Rs. 1,200/- or more per month is not justified on medical grounds and as such this distinction should be removed.

118. A Central Pharmacy be established in the medical store for the manufacture of certain drugs.

119. The CGHS formulary of medicines is quite exhaustive. The practice of giving medicines outside the formulary and in excessive quantity should be voluntarily discontinued and doctors should be considered as the best judge to prescribe the medicines.

120. A committee of experts should be set up to go into this question and suggest measures for removing the disparity in expenditure in various dispensaries.

121. The use of proprietary names should be progressively eliminated and the drugs should bear generic names. Stricter internal checks should be enforced to eliminate pilferage. To prevent impersonation separate identity cards for every beneficiary containing his/her photograph should be issued.

122. The rates of contributions has remained the same since the inception of the scheme in 1954 inspite of sharp rise in expenditure. Contributions made by the beneficiaries to the C.G.H.S. should be raised in the same proportion as the rise in total emoluments to the beneficiaries since the rates of contributions were last fixed.

123. Since the C.G.H.S., dispensaries are providing comprehensive health care, they should be redesignated as "Health Centres for Central Government Employees".

DIFFICULT AREAS

124. The referral functions entrusted to District Hospitals generally, should, in case of Difficult Areas, be made in responsibility of the Sub-Divisional hospitals (tehsil, taluq or another suitable administrative sub-division.) These hospitals may have more than 50 beds and in addition to surgical, medical, gynaecological and obstetrics specialities should have other specialities such as ophthalmology, dermatology, E.N.T. venereal diseases and dentistry.

125. The number of Primary Health Centres should be raised to two in a Block. The frequency of visits of health workers

should be raised gradually to one in a week. There should be a provision of 10 beds and in addition an isolated hut.

126. Within areas of Primary Health Centres suitable sub-centre to be known as 'key villages' should be selected in such a manner that one or another of the key villages lie within half a day's march from the farthest village. Doctors from the P.H.C. should visit the village, examine patients and dispense medicine, once in a week, on days extensively publicised.

127. First aid kits should be kept in village and school teacher or a Surpanch or one of the Panchs should be given short training course to provide first aid services to villages.

128. Doctors working in difficult areas should be given higher rural allowance than obtaining in other rural areas.

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