Annual report of the Directorate General of Health Services / issued by the Central Bureau of Health Intelligence, Directorate General of Health Services, Ministry of Health, Government of India.

ANNUAL REPORT

OF THE

DIRECTORATE GENERAL OF HEALTH SERVICES

1959

ISSUED BY

THE CENTRAL BUREAU OF HEALTH INTELLIGENCE
DIRECTORATE GENERAL OF HEALTH SERVICES,
MINISTRY OF HEALTH, GOVERNMENT OF INDIA,
NEW DELHI—1.

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INTRODUCTION

Since the attainment of independence in 1947 the raising of the health standard of the people has become one of the major tasks before the Government of India in view of the prevalence of the various communicable diseases, lack of environmental sanitation, inadequacy of medical facilities both for curative and preventive purposes, low nutritional level and lack of health consciousness etc. The programmes of development and national reconstruction following independence laid special emphasis on the control of mass communicable diseases particularly Malaria, Tuberculosis and on improvement of Maternity and Child Health Services in the country. Although a good achievement has been made in ameliorating sickness and promoting health conditions of the people, a lot still remains to be achieved.

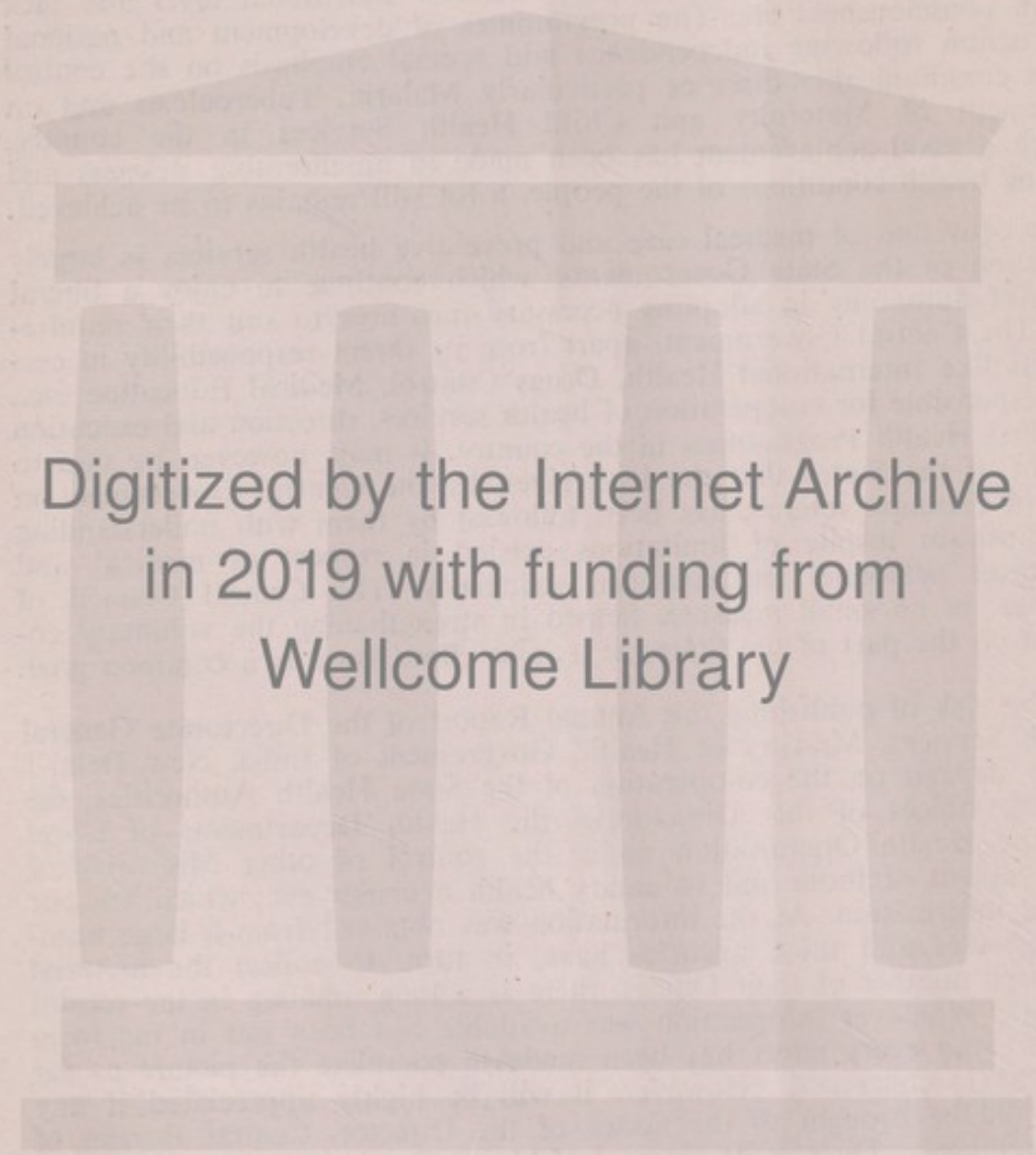
The provision of medical care and preventive health services is largely the function of the State Governments, which continue to enjoy a liberal measure of autonomy in adopting necessary measures to suit their requirements. The Central Government, apart from its direct responsibility in certain fields like International Health, Drugs Control, Medical Education etc., is also responsible for co-operation of health services, direction and execution of National Health Programmes in the country. It may, however, be said to the credit of the States that the lead given by the Central Government in matters of common interest has been followed by them with understanding and enthusiasm inspite of limitations existed in respect of medical and para-medical personnel and financial stringency. The Central Council of Health has, in no small measure, helped in strengthening the voluntary co-operation on the part of the States in a joint effort towards a common goal.

In the task of publishing the Annual Report of the Directorate General of Health Services, Ministry of Health, Government of India, New Delhi-1 we solely depend on the co-operation of the State Health Authorities, the subordinate offices of this Directorate, the Health Departments of Local Bodies, the Health Organisation under the control of other Ministries of the Government of India and voluntary health agencies etc., which are our sources of information. As the information was obtained from a large number of agencies and these agencies have, in turn, to collect the material from a large number of their Offices, there is a long time-lag in the receipt of the data. Whatever information was available has been put in the form of a report and every effort has been made to complete the picture as far as the year is concerned. However, it will be highly appreciated if any defects could be brought to the notice of the Director, Central Bureau of Health Intelligence, Directorate General of Health Services, New Delhi-1 with suggestions for necessary modifications.

In the end, we feel once again to extend our grateful thanks and appreciation for the continued co-operation of the Officers of the various Sections of the Directorate General of Health Services, and Institutions under the Central and State Governments in the compilation of the basic data for this report.

The 29th Feb., 1964
NEW DELHI (India);

M. S. CHADHA
Director General of Health Services.



CHAPTER I

DEMOGRAPHY

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DEMOGRAPHY

POPULATION AND VITAL AND HEALTH STATISTICS

(i) *Population.*—India ranks in the world population second only to China. With an area of little more than two per cent (2·4 per cent) of the total land area of the world, India has to support about 14 per cent of the world population.

3,569 lakhs of persons were enumerated in the last decennial census of population as taken on 1st March, 1951 as against 3,128 lakhs in 1941 in the Indian Union excluding the State of Jammu and Kashmir and the tribal areas of Assam where census could not be conducted because of the peculiar conditions prevailing there. The annual percentage increase for the decade 1941-51 works out to be 1·47 as against 1·10 for the world as a whole for the period 1941-51.

For inter or post-censual years estimates have been attempted. The mid-year population of India for the year 1959 was estimated to be 402·60 millions as against 397·39 millions during 1958. The mid-year estimated population for the years 1959 and 1958 for each State and Union Territory together with density per sq. mile is given below: —

States	Mid-year estimated population (in million)		Density (per sq. mile)	
	1959	1958	1959	1958
1	2	3	4	5
1. Andhra Pradesh	34·88	34·41	328	326
2. Assam	10·46	10·28	123	122
3. Bihar	42·08	41·67	627	620
4. Bombay	55·81	54·85	292	288
5. Jammu and Kashmir	4·75	4·71	52	55
6. Kerala	16·07	15·75	1,072	1,054
7. Madhya Pradesh	27·94	22·71	163	162
8. Madras	33·60	33·14	669	661
9. Mysore	22·48	22·08	300	295
10. Orissa	15·41	15·32	256	254
11. Punjab	17·39	17·23	366	366
12. Rajasthan	17·97	17·27	136	134
13. Uttar Pradesh	69·36	68·59	611	605
14. West Bengal	29·16	28·80	852	842

Union Territories	Mid-year estimated population (in million)		Density (per sq. mile)	
	1959	1958	1959	1958
1	2	3	4	5
15. Andaman and Nicobar Islands	0·03	0·03	9	9
16. Delhi	2·25	2·18	3,892	3,772
17. Himachal Pradesh	1·15	1·15	105	105
18. Laccadive Islands	0·02	0·02	*	*
19. Manipur	0·64	0·63	74	73
20. Pondicherry	0·38	0·37	2,043	*
21. Tripura	0·77	0·75	190	182
TOTAL	402·60	397·39	320	315

NOTE.—*Figures not available.

It will be noted from the table given above that there was a slight increase in the density per square mile from 315 in 1958 to 320 in 1959. As in previous years Delhi recorded the highest density (3,892) followed by Pondicherry (2,043) and Kerala (1,072). The Andaman and Nicobar Islands reported the least density (9); other areas with thin density were the State of Jammu and Kashmir (52) and the Union Territory of Manipur (74).

The following table shows the percentages of age composition (estimated) in India during 1959 and in some other countries during different census years in the world:—

Categories	Parcentages of age composition						
	Age-Group (in years)	India (1959)	Ceylon (1956)	Japan (1957)	Canada (1958)	United Kingdom (England and Wales) (1957)	United States (1958)
(i) Infants and Young Children	0—4	16·3	16·3	9·2	12·6	7·4	11·2
(ii) Boys and Girls	5—14	23·4	24·4	22·7	20·6	15·5	19·5
(iii) Young men and women	15—24	17·9	17·9	19·2	14·4	12·3	13·4
	25—34	14·7	14·9	16·1	14·6	13·5	13·4
		(32·6)	(32·8)	(35·3)	(29·0)	(25·8)	(26·8)
(iv) Middle aged persons	35—44	11·4	11·0	11·4	13·2	14·1	13·5
	45—54	8·1	7·9	9·3	10·0	14·3	11·6
		(19·5)	(18·9)	(20·7)	(23·2)	(28·4)	(25·1)
(v) Elderly persons	55—64	5·0	4·1	5·5	7·0	11·1	8·7
	65 and over)	3·2	3·5	6·5	7·5	11·7	8·6
		(8·2)	(7·6)	(12·0)	(14·5)	(22·8)	(17·3)

According to the estimates for 1959, in India 16·3 per cent were infants and young children under 4 years of age, 23·4 per cent were boys and girls between the age group of 5-14 years. Young men and women between the age group of 15-34 years constituted 32:6 per cent of population, 19·5 per cent of the population belonged to middle age and 8·2 per cent to old age. The comparatively information for other countries reveals that the percentage in the age group of 55 years and over was more in the case of advance countries like United Kingdom, U.S.A., Canada and Japan, and less in the case of Ceylon *i.e.* 7·6 per cent as compared with 8·2 per cent in India.

Another important feature of the population is the number of females per 1,000 of male population. According to the latest census figures available for some countries, the females were more in number than males in Japan, Nepal, U.S.A., England and Wales, whereas there were fewer females than males in Canada, Ceylon, China (Tawain), Burma, Australia and India. The table below gives the values obtained in last census of some of the countries in the world:—

	Country	Date of last census	No. of females per 1,000 of males
1	Canada	1-6-56	973
2	U. S. A	1-4-50	1,037
3	Burma	1-2-53	961
4	Ceylon	10-3-53	897
5	China (Taiwan)	16-9-56	871
6	India	1-3-51	947
7	Japan	10-10-55	1,306
8	Nepal	28-5-54	1,033
9	United Kingdom (England and Wales)	8-4-51	1,082
10	Australia	30-6-54	976

As regards individual States in India it is significant to note that in all the States except Kerala, Madras and Orissa the number of females were less than those of males. The State of Kerala recorded the highest and Delhi the least.

(*ii*) *Vital and Health Statistics*:—The registration of births and deaths has its own significance in the study of trends and the changes in the structure of population. The Registration System in India is a century old by now and various steps have been taken from time to time to improve it. During the year under report compulsory registration of births and deaths was extended to the remaining urban areas of Telengana region in Andhra Pradesh though there was still no registration system in Visakhapatnam and Srikakulam Agency areas. The Births, Deaths and Marriages Act, 1886, providing for voluntary registration, applies to Manipur. The vital statistics for Manipur was collected for five police stations with a total population of 387,523 as per 1951 census. The Births, Deaths and Marriages

Registration Act, 1886 though extended to the territory of Tripura had not yet been enforced. Though the whole State of Jammu and Kashmir was under registration but the arrangements were not functioning properly for some reasons or the other. Among the major States Rajasthan had no registration of births and deaths in the rural areas. During the year under review in the Orissa State the responsibility for registration of births and deaths in the rural areas was passed on to the Panchayat. Thus the present position regarding registration of births and deaths in different States in India is varying and the States are in different stages of completion and accuracy in this regard.

The population of registration areas in 1951 and 1961 censuses of different States in India are given in Table No. 1.

The table below shows the registered birth rates in urban and rural areas recorded in different States of India during the years 1958 and 1959:—

States	Birth Rates (per mille of mid-year estimated population)					
	Rural		Urban		Total	
	1958	1959	1958	1959	1958	1959
1	2	3	4	5	6	7
1. Andhra Pradesh	17·9	17·1	24·3	21·6	13·9	17·9
2. Assam	8·1	7·2	21·1	23·5	8·8	8·0
3. Bihar	13·5	12·4	9·8	13·5	13·2	12·5
4. Bombay	29·5	29·7	26·6	31·0	28·6	30·1
5. Jammu and Kashmir	*	*	*	*	*	*
6. Kerala	24·3	23·2	24·6	43·1	24·3	25·0
7. Madhya Pradesh	17·7	16·8	16·3	20·7	17·5	17·3
8. Madras	24·4	26·6	34·2	39·8	27·0	29·9
9. Mysore	23·2	34·1	24·5	30·4	23·5	33·0
10. Orissa	25·3	27·9	34·3	32·0	25·6	28·1
11. Punjab	39·0	36·7	34·5	31·7	38·1	35·8
12. Rajasthan	*	*	*	12·9	*	12·9
13. Uttar Pradesh	13·9	12·4	27·8	28·0	15·9	14·5
14. West Bengal	23·4	23·1	20·5	19·6	22·7	22·4
Union Territories :						
15. Andaman and Nicobar Islands	*	18·2	*	40·2	*	23·9
16. Delhi	27·5	21·4	29·4	32·2	29·1	30·3
17. Himachal Pradesh	17·4	15·8	19·1	26·7	17·5	16·3
18. Laccadive Islands	*	*	*	*	*	*
19. Manipur	*	4·4	*	34·5	*	7·7
20. Pondicherry	*	26·6	*	103·9	*	42·3
21. Tripura	*	*	*	*	*	*
TOTAL	20·8	20·5	26·3	28·4	21·8	21·9

NOTE.—*Figures not available.

SOURCE:— Birth Rates taken from the Vital Statistics of India for 1958 and 1959 published by the Registrar General, India, New Delhi.

From the above table it will be seen that during 1959 Pondicherry recorded the highest birth rate *i.e.* 42·3 per mile of population followed by Punjab (35:8), Mysore (33:0), Delhi (30·3) and Bombay (30·1). Among the major States the lowest birth rate was recorded in Uttar Pradesh (14·5) while Bihar returned (12·5) and Madhya Pradesh (17·3) and Andhra Pradesh (17·9). In comparison with 1958, the birth rates have slightly increased in the States of Bombay, Delhi, Madras, Orissa, Kerala and Mysore. A slight decrease is also observed in the States of Bihar, Madhya Pradesh, Punjab, Uttar Pradesh and West Bengal. The higher birth rate (35·8) recorded in Punjab may perhaps be partly due to high degree of accuracy in the registration system. The comparison between individual States is not strictly warranted on account of varying degree of accuracy of registration. As regards urban and rural classification in both the years, birth rates in urban areas were mostly higher than in the rural areas of the States. The reasons for higher birth rate in urban areas was probably due to better registration in that area.

The statistics of still births and sex ratio during the years 1958 and 1959 is given in Table No. 2. It will be observed that the number of male births was more in all the States except in the Union Territory of Andaman and Nicobar Islands where it was recorded to be 99 males for 100 females. It may also be noticed that both in rural and urban areas the number of male live births was higher than female live births during the year under report. As regards still births, among the major States Bombay and Punjab reported the highest and the lowest figures as 19,743 and 1,436 respectively. The figures for Delhi are a little higher than in the previous year.

The registered death rates for 1959 with corresponding figures for the year 1958 recorded in different States are given below:—

States	Death Rates (per mille of population)					
	Rural		Urban		Total	
	1958	1959	1958	1959	1958	1959
1	2	3	4	5	6	7
1. Andhra Pradesh . .	10·5	7·8	10·3	8·7	10·4	8·0
2. Assam	3·6	3·3	7·5	8·2	3·8	3·5
3. Bihar	7·5	5·2	5·3	4·9	7·4	7·2
4. Bombay	17·3	13·3	12·4	12·0	15·8	13·0
5. Jammu and Kashmir . .	*	*	*	*	*	*
6. Kerala	7·4	7·0	8·0	12·1	7·5	7·4
7. Madras	12·6	9·7	14·4	14·9	13·1	12·5
8. Madhya Pradesh . .	11·9	8·4	10·0	9·7	11·6	8·6
9. Mysore	10·8	15·5	9·5	11·2	10·5	14·2
10. Orissa	18·4	13·6	18·9	14·3	18·4	13·6

States	Death Rates (per mille of population)					
	Rural		Urban		Total	
	1958	1959	1958	1959	1958	1959
1	2	3	4	5	6	7
11. Punjab	15·4	11·9	9·2	7·7	14·2	11·1
12. Rajasthan . . .	*	*	*	7·4	*	7·4
13. Uttar Pradesh . . .	9·1	7·0	13.3	11·2	9·7	7·6
14. West Bengal . . .	9·5	7·0	9·4	8·6	9·5	7·3
Union Territories :						
15. Andaman and Nicobar Islands	*	5·9	*	7·1	*	6·2
16. Delhi	10·7	6·5	8·5	9·0	8·9	8·6
17. Himachal Pradesh . .	8·2	7·2	10·2	11·1	8·3	7·4
18. Laccadive Islands . .	*	*	*	*	*	*
19. Manipur	*	1·7	*	9·2	*	2·5
20. Pondicherry . . .	*	17·3	*	31·8	*	20·3
21. Tripura	*	*	*	*	*	*
TOTAL .	11·4	8·9	11·5	10·8	11·4	9·2

NOTE:—*Figures not available.

SOURCE:—Death Rates taken from the Vital Statistics of India for 1958 and 1959 published by the Registrar General, India, New Delhi.

The registered death rate was higher in the State of Mysore (14·2) during the year under report followed by Orissa (13·6) and Bombay (13·0). The lowest death rate was recorded in Manipur (2·5), Assam (3·5) and Bihar (7·2). The urban and rural classification reveals that registered death rates, like registered birth rates are higher in urban areas than those in rural areas in most of the States. It may also be observed that death rate during 1959 was slightly lower than in 1958.

It is very essential that the deaths should be recorded by cause, age and sex but, due to lack of proper diagnostic facilities and non-availability of sufficient number of medical personnel, registration of deaths by causes was not feasible. The death statistics, however, is being collected throughout the country for six major diseases such as Cholera, Smallpox, Plague, Dysentery and Diarrhoea, Fevers (including Malaria) and Respiratory Diseases. The other diseases are being shown and included in the group "Other causes". Attempts are, however, being made to collect the death statistics by causes according to International Classification of Diseases.

The percentage distribution of total deaths in different age groups in India during the years 1958 and 1959 is given below:—

Years	Under 1 year	1—4 years	5—9 years	10—14 years	15—19 years
1958	19·7	20·2	6·0	3·4	3·3
1959	20·9	17·6	5·2	3·2	3·4

Years	20—29 years	30—39 years	40—49 years	50—59 years	60 years and above
1958	6·2	6·2	6·8	8·4	18·5
1959	6·2	6·4	7·1	8·5	21·4

The above data is based on the information received from the States of Andhra Pradesh, Bombay, Delhi, Kerala, Madhya Pradesh, Madras, Mysore, Orissa, Punjab, Uttar Pradesh and West Bengal. Although the percentages for 1958 and 1959 are not strictly comparable yet they throw some light of the trends in deaths in different age groups. It is observed that the percentage of deaths among infants is almost of the same order as in the age group of 60 years and above. It will also be seen that during both the years nearly 50 per cent of total deaths were recorded in the age group of 0-14 years.

Infant Mortality.—The mortality among infants is of special significance because it is regarded as one of the most sensitive indices of health of the general population. It is gratifying to note that the infant mortality rate in India has come down to 86·7 in 1959 from 101·8 in 1956 according to the registered data. The table below shows the infant mortality rates per 1,000 of live births registered in different States in India during the years 1958 and 1959:—

States	Infant Mortality Rates (per mille of live births)	
	1959	1958
1	2	3
1. Andhra Pradesh	83·1	85·9
2. Assam	90·0	77·4
3. Bihar	72·5	74·0
4. Bombay	97·4	112·6
5. Jammu and Kashmir	*	*
6. Kerala	91·6	49·0
7. Madhya Pradesh	99·2	146·7
8. Madras	91·1	103·4
9. Mysore	87·9	71·0
10. Orissa	120·0	155·2
11. Punjab	95·6	1 08·4
12. Rajasthan	*	*
13. Uttar Pradesh	85·1	103·0
14. West Bengal	69·8	80·4

Union Territories :	Infant Mortality Rates (per mille of live births)	
	1959	1958
15. Andaman and Nicobar Islands	33·2	64·9
16. Delhi	74·0	85·3
17. Himachal Pradesh	*	*
18. Laccadive, Islands	*	*
19. Manipur	*	*
20. Pondicherry	*	*
21. Tripura	*	*
TOTAL	86·7	98·0

NOTE:—*Figures not available.

SOURCE:—Infant Mortality Rates taken from the Vital statistics of India for 1958 and 1959 published by the Registrar General, India, New Delhi.

The ratio has decreased significantly in all parts of the country except in Assam where increase was registered. The ratio is still very high when compared with those of other countries. Information for 1959 in respect of some of the countries is given below:—

Country	Infant Mortality Rates
1. U. S. A.	26·4
2. Canada	28·4
3. Colombia	96·9
4. Mexico	74·4
5. Ceylon	57·5
6. China (Taiwan)	33·3
7. India	86·7
8. Japan	33·7
9. Indonesia	84·1
10. Belgium	30·4
11. Denmark	22·5
12. France	29·5
13. Sweden	16·6
14. Yugoslavia	91·8

Maternal Mortality.—Due to varying degree of under registration, figures are neither comparable nor it is possible to build up an all India picture. However, the maternal mortality rates given below and reported

by the State Health Authorities in 1959 indicate the need for higher emphasis in pre-natal and post-natal care of expectant mothers.

States	Maternal Mortality Rates
1. Andhra Pradesh	4·4
2. Assam	8·6
3. Bombay	4·3
4. Bihar	2·1
5. Jammu and Kashmir	*
6. Kerala	2·5
7. Madhya Pradesh	6·9
8. Madras	3·9
9. Mysore	5·4
10. Orissa	*
11. Punjab	*
12. Rajasthan@	6·8
13. Uttar Pradesh	*
14. West Bengal	*
Union Territories :	
15. Andaman and Nicobar Islands	*
16. Delhi	*
17. Himachal Pradesh	1·8
18. Laccadive, Islands	*
19. Manipur	1·8
20. Pondicherry	*
21. Tripura	*

NOTE:—@Figures relate to urban areas only.
*Figures not available.

The All-India Rate estimated by experts in 1959 was 10.4 as against 20 per thousand of live births and still births worked out by Bhore Committee (1945-47). The downward trend in the ratio is an indication of an improvement in pre-natal and post-natal facilities offered to the expectant mothers.

Expectation of Life at Birth.—Expectation of life is an important index to summarise the mortality experience in life time of population and is, therefore, used for comparing the health conditions of different population groups. The table below indicates the expectation of life at birth by sex in India from 1891-1901 to 1956-1961.

Period	Expectation of life at birth	
	Male	Female
1891—1901	23·6	24·6
1901—1911	22·6	23·3
1921—1931	26·9	26·6
1941—1950	32·5	31·7
1951—1956	37·8	37·5
1956—1961	41·7	42·1

The figures for 1951-1956 and 1956-1961 are the estimates prepared by the Planning Commission and prior to that were taken from census actuary. The above information shows a definite increase in longevity in life in India since around 1901.

CHAPTER II

GENERAL EPIDEMIOLOGY

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(i) Small-pox

Small-pox continues to take a heavy toll of population in India and was responsible for 0·62 per cent of deaths in the country during the year 1959. The incidence of the disease was reported from all the States and the Union Territories of Delhi, Himachal Pradesh and Pondicherry. The Union Territories of Andaman and Nicobar Islands, Manipur and Tripura, however, were free from the disease. Information from Jammu and Kashmir was not received during the year under report. 22,164 deaths due to small-pox were reported during the year 1959 as against 88,859 deaths during the year 1958 giving a death rate of 53 and 241 per million of population respectively. The percentages of smallpox deaths to total deaths and death rates per million of population in various States in India during the years 1959 and 1958 are given below:—

States	Percentages of small-pox deaths to total deaths		Death Rates (per million of population)	
	1959	1958	1959	1958
1. Andhra Pradesh	0·90	4·72	70	490
2. Assam	0·15	0·14	6	49
3. Bihar	2·40	0·89	130	69
4. Bombay	0·55	3·32	70	510
5. Jammu and Kashmir	*	*	*	*
6. Kerala	2·00	1·31	100	101
7. Madhya Pradesh	1·60	0·71	100	88
8. Madras	0·60	1·28	70	165
9. Mysore	1·60	2·71	200	284
10. Orissa	5·30	10·11	700	1,813
11. Punjab	0·05	0·14	6	22
12. Rajasthan	4·78	2·83	414	1,101
13. Uttar Pradesh	1·20	4·44	100	411
14. West Bengal	1·00	5·60	100	522
Union Territories :				
1. Andaman and Nicobar Islands	—	—	—	—
2. Delhi	0·40	0·63	40	70
3. Himachal Pradesh	—	0·22	—	21
4. Laccadive, Minicoy and Amindive Islands	—	—	—	—
5. Manipur	—	0·88	—	34
6. Pondicherry	3·50	*	710	*
7. Tripura	—	*	—	*
TOTAL	0·62	2·11	53	241

NOTE :— *Information not available.
— Nil information.

From the table it may be seen that the incidence of the disease was very high in the States of Mysore, Orissa and Pondicherry.

It has been observed that the disease was prevalent throughout the year in almost all the States, its maximum incidence being in summer months, except in the States of Andhra Pradesh, Madhya Pradesh and Pondicherry.

The Central Expert Committee, to go into the question of epidemiology of Cholera and Small-pox, was appointed by the Government of India under the auspices of the Indian Council of Medical Research. The Committee was set up to suggest ways and means to control the spread of these diseases and for their ultimate eradication. On its recommendations, expert committees were also constituted in some States. Ways and means for the control and eradication of Small-pox and Cholera were considered jointly by the Central Expert Committee and the representatives of the expert committees set-up by the State Governments at a meeting held in October, 1959.

The prevailing conditions due to disease in different States are shown by the number of districts affected, cases and deaths notified, case fatality ratios and the months of peak incidence etc. are shown in Table No. 3.

The prevailing situation of small-pox in various States in India is given below:—

Andhra Pradesh: The infection was prevalent during the year 1958 and it continued during 1959 and reached its maximum in the month of January, 1959. Since then there was a slow but a steady decline from month to month and the incidence reached its lowest ebb during October, 1959 and continued to be sporadic upto November, 1959. During the year under review the incidence was mainly reported from East Godavari, West Godavari, Guntur, Anantapur, Srikakulam and Kurnool districts. In all other districts the incidence was reported either in mild or sporadic form.

Prompt effective preventive and control measures were carried out to bring the epidemic under control. Extra staff was appointed. Measures like disinfection of infected premises and articles, vaccinations, isolation and treatment of Small-pox cases, wherever possible, were undertaken.

Assam: During the year under review the incidence of the disease was less than that during the previous year reporting 290 and 416 cases respectively. The incidence, though sporadic, was reported from almost all the districts of the State.

Bihar: 1,415 cases and 396 deaths were notified by the Local Health Authorities during the year 1959 as against 10,046 cases and 2,819 deaths during the previous year. The month of April in both the years reported the peak incidence of the disease.

Bombay: 4,141 deaths due to Small-pox were recorded during the year under review. All the districts of the State, except those of Dangs, Buldana and Yeotmal, were more or less affected. The high incidence of the disease was recorded in Jamnagar, Junagadh, Nasik, Poona, West Khandesh, Sholapur, Bhavnagar and Ahmednagar districts. In other districts the disease prevailed either in considerable or mild form.

Mass vaccination campaign was organised in all the affected and threatened areas. The total number of primary and re-vaccinations performed in the State were 14,17,377 and 113,83,721 respectively. The Expert Committee set up by the Government of India had made the recommendation that a pilot project in each State may be taken up to combat with the disease. Accordingly Chanda and Mehsana districts were selected as pilot project areas in this State.

Kerala : 6,090 cases and 2,389 deaths due to Small-pox were reported during the year under report. Although all the districts of the State reported the incidence of the disease, Trichur and Palaghat districts were severely affected. Nearly 50 per cent of the total deaths were reported under the age-group of 0-10 years. Mass vaccination was carried out in the affected and surrounding localities by deputing extra staff during the epidemic period.

Madhya Pradesh : 4,158 cases and 723 deaths due to Small-pox were reported from all the districts of the State during the year 1959. The death rate per mille of mid-year estimated population and percentage of deaths to total deaths was 0·03 and 0·25 respectively. It may be mentioned in this connection that more than 85 per cent of the total Small-pox deaths occurred under the age-group of 0-10 years. This might be due to the reason that many children escaped from primary vaccination. The State Government appointed an Expert Committee on Small-pox and Cholera under the chairmanship of the Director of Health Services with the object of engaging their attention on the problems of Cholera and Small-pox epidemics and to devise short and long term methods for the control and ultimate eradication of both these diseases. The Committee had since submitted its recommendations to the State Government. One of the major recommendations is to start a pilot project area in one of the districts having a population of 10-15 lakhs and to work out the cost and the man power requirements for taking up the mass eradication programme against Small-pox throughout the State and the Durg district was selected for the purpose.

Madras : 2,225 deaths with a death rate of 0·07 per mille of population were reported during the year 1959 as against 5,493 deaths with a death rate of 0·17 during the year 1958. The districts of Ramanathapuram, Tirunelvelli, Nilgiris and Kanya Kumari reported stray cases while the other districts were mildly affected.

The number of Small-pox deaths in Municipal areas constituted nearly 40 per cent of the total deaths.

The age distribution of Small-pox mortality in this State was as follows :—

Age group	Number of Small-pox deaths
(i) Under 1 year	535
(ii) 1—10 years	841
(iii) 10 years and over	849
TOTAL	2,225

The large proportion of mortality in the age group under 1 year and 1-10 years shows that many children escaped from primary vaccinations.

Besides, mass vaccination and re-vaccination campaigns were launched in the affected and surrounding areas, disinfection of infected premises and material, home seggregation of cases and isolation of cases in hospitals and wards, wherever feasible, and education propaganda among the people about the mode and spread of Small-pox were undertaken. House to house inspection was made to detect hidden cases of Smallpox and unprotected children and all the unprotected persons were vaccinated. The Health Inspectors were also posted to heavily affected areas. Special vaccination staff was appointed wherever necessary for intensifying vaccination campaign. To facilitate prompt movement of the staff and materials, the services of Mobile Epidemic Vans were also requisitioned to the affected areas.

The vaccination campaign continued and a total of 1,136,661 primary vaccinations and 5,109,866 re-vaccinations were carried out. The percentage of success of primary vaccinations was very high while that of re-vaccinations was less. The distribution of successful cases of primary vaccination during the year 1959 as per age group was as follows:—

Age groups	Number of successful primary vaccinations
(i) Under 1 year	477,476
(ii) 1—5 years	289,489
(iii) 5—10 years	40,364
(iv) 10 years and over	6,052
TOTAL	813,381

The Central and the State Expert Committee on Cholera and Smallpox recommended the launching of the mass vaccination campaign to cover the entire population of the State in a period as short as possible so as to eradicate Smallpox completely from the State. As a preliminary step to the areas; vaccination programmes throughout the State, a pilot scheme of Smallpox eradication in Chingleput district was proposed for being worked out during the year 1960-61.

Mysore: 3,593 deaths due to Smallpox were reported. The districts of Belgaum, Bijapur, Coorg, Dharwar, Mandya and the Cities of Mangalore and Hubli were severely affected. The incidence was also reported from all other districts of the State.

Orissa: 2,143 deaths due to Smallpox were reported during the year under review as against 6,000 deaths during the previous year. The maximum number of deaths were reported from the Kalahandi district of the State. The other worst affected districts were Koraput, Sambalpur, Bolangir-Patna and Ganjam. 7,36,568 primary and 27,88,402 re-vaccinations were performed to combat the disease during the year under review.

Punjab : During the year under report 116 deaths were reported as against 362 and 198 deaths during the year 1958 and 1957 respectively. Bhatinda district reported the maximum deaths (22) followed by Sangur district (21) and Hissar district (20). 65·5 per cent of the total Small-pox deaths were reported among the children up to the age group of 10 years. As compulsory re-vaccinations was enforced in the State, there is every possibility of protecting a larger number of susceptible population. 7,07,987 primary and 21,40,394 re-vaccinations were performed during the year under report. The percentages of successful primary and re-vaccinations were 98·6 and 47·5 respectively.

Rajasthan : Out of 26 districts in the State 25 districts were affected with Smallpox reporting 2,581 cases and 828 deaths. The maximum incidence was reported in the month of April. Mass vaccination campaign was carried out and 382,215 primary and 353,533 re-vaccinations were performed. The percentages of successful primary and re-vaccinations were of the order of 60·0 and 23·0 respectively.

Uttar Pradesh : The incidence of the disease was reported from 49 districts out of 51 districts in the State. The death rate per million of mid-year estimated population and percentage of Smallpox deaths to total deaths were 100 and 1·2 respectively.

West Bengal : There was a sharp decline in the incidence of the disease during the year under review. The death rate per million of mid-year estimated population was 100 as against 522 during the year 1958. There was also a considerable fall in the percentage of Smallpox deaths to total deaths, the percentage being 1·0 during the year 1959 as against 5·6 during the previous year.

Andaman and Nicobar Islands : This Union Territory was free from the disease during the year under report.

Delhi : There was a slight decline in the incidence of Smallpox during the year under review. In 1959 the death rate per million of population was 40. The percentage of Smallpox deaths to total deaths was 0·40 and 0·63 during the years 1959 and 1958 respectively. Preventive measures were undertaken and mass vaccination campaign was also carried out.

Himachal Pradesh : In 1959 the incidence of Smallpox was reported from 4 districts and 8 villages of the Union Territory. The infection was generally reported from the neighbouring States. The maximum incidence was reported during the month of April when 25 cases and 2 deaths were recorded. Mass vaccinations, disinfection and other necessary public health measures were carried out in the affected areas. Since the outbreak of the disease was not in an epidemic form, no extra staff was appointed but the situation was controlled by the existing public health staff. No regulations were enforced under the Epidemic Diseases Act, 1889.

Laccadive Islands.—No incidence of Smallpox was reported from the Territory.

Manipur : This Union Territory remained free from the disease during the year under review. Vaccination against Small-pox was, however, carried out.

Pondicherry : 445 cases and 257 deaths due to Smallpox were reported from the districts of Pondicherry and Karikal. The incidence was highest in January, when 24 cases and 7 deaths were reported. Out of 257 deaths, 92 and 102 were reported among children under one year of age and 1-10 years respectively. A total of 104,691 vaccinations were performed in all the four districts of the Territory.

Tripura : No incidence was reported from this Territory during the year under report. 66,282 primary and 326,493 re-vaccinations were performed.

(ii) Plague

Plague, one of the six quarantinable diseases, is notifiable throughout the country. The disease has, practically, been wiped off and only sporadic cases were reported from some pockets of the country. The number of deaths due to Plague, the death rates per mille of mid-year population and the anti-plague inoculations performed in the country during the years 1950-59, are given in Table No. 4.

During the year under review the cases were reported only from the States of Bihar, Madras, Mysore and from the Union Territory of Himachal Pradesh. In all, 192 deaths were reported in 1959 as against 247 deaths during 1958. The details about the States, where cases were reported, are given below :—

Bihar : During the year under review, 89 deaths were reported as against 68 reported during the previous year. Anti-plauge inoculations were performed throughout the year. The peak incidence of the disease was reported in July and followed by February.

Madras : 17 cases and 7 deaths due to plague were reported during the year under report from three villages in Dakanccotta Division, Hosur Taluk, Salem district. Necessary preventive measures were undertaken. The infected and all the neighbouring villages were immediately treated with D.D.T. and 11,604 anti-plague inoculations were performed. The "off season" anti-plague measure was continued in the districts of Salem, Coimbatore, the Nilgiris and in the municipal towns of Coimbatore, the Nilgiris, Coonoor and Ottaccamund, which are the endemic areas. On the whole 160,886 houses, 37,729 huts, 12,64,357 roddent burrows, 483,508 cracks and other harbourages were insulated with D.D.T.

Mysore : 91 deaths with a death rate of 0·4 per mille of population were reported from the State during the year under review. The maximum number of deaths were recorded during the month of July followed by January. All the districts (except Bidar, Coorg, Dharwar and Tumkur) were affected with the disease. The necessary preventive measures to control the disease were undertaken. Mass anti-plague inoculation programme was carried out.

Himachal Pradesh : 15 cases and 5 deaths due to plague were reported during the months of October and November, 1959 from five villages of this Union Territory. Necessary preventive and precautionary measures were undertaken. Anti-plague inoculations were performed in 2,766 villages.

(iii) Cholera

Cholera, one of the six quarantinable diseases, is notifiable throughout the country. In 1959 it took a toll of 6,290 deaths as against 47,033 recorded during the year 1958, which was an epidemic year. There were

out-breaks of mild epidemic of the disease in the States of Bihar and West Bengal, while the incidence was still milder in the States of Andhra Pradesh, Assam, Bombay, Madhya Pradesh, Madras, Mysore, Orissa, Rajasthan, Uttar Pradesh and the Union Territory of Tripura. The States of Kerala, Punjab and the Union Territory of Andaman and Nicobar Islands were free from the disease where as information from Jammu and Kashmir was not received during the year under report.

The death rate due to Cholera for the country as a whole worked out to be 16 per million of population in 1959 as against 128 during the year 1958. The death rates due to Cholera and percentages of deaths due to Cholera among the total deaths for individual States for the years 1959 and 1958 are presented in Table No. 5.

The number of districts and villages affected with the disease, cases and deaths notified, the period of peak incidence and the number of anti-cholera inoculations performed in different States/Administrations during the years 1959 and 1958 are presented in Table No. 6.

A brief account of the prevalance of Cholera and the preventive measures undertaken in each State during 1959 is given below:—

Andhra Pradesh : Cholera usually breaks out during paddy transplantation and harvest seasons *i.e.* the months of July-August and January-February. Deltaic areas are mostly affected due to migration of labour population, which uses unprotected and polluted water.

During the year under report the disease was reported from 183 villages of 11 districts in the State. 784 persons died due to Cholera out of 1,683 cases reported. The peak incidence was reported during January and the least in the month of July. The districts of West Godavari, Krishna and Guntur were severely affected from where nearly 60 per cent of the total cases were reported. All the necessary preventive and control measures were taken by the health staff to combat the disease. Additional health staff from the non-infected areas were transferred whenever found necessary. Epidemic control vans were utilised for transporting cases of Cholera to the Infectious Diseases Hospitals and Isolation Sheds.

Assam : 31 deaths out of 41 cases notified were reported from two districts of the State. The case fatality rate worked out to be as high as 75.61. All necessary preventive and precautionary measures were undertaken. 13,77,026 anti-Cholera inoculations were performed during the year under review.

Bihar : 2,315 deaths were reported from 10 infected districts of the State. The districts of Patna, Gaya and Monghyr were mainly affected. The high incidence of the disease was reported in the month of October. 15,660,590 anti-Cholera inoculations were performed.

Bombay : The disease prevailed in a mild form claiming 454 deaths as against 7,374 deaths in 1958. The total number of cases reported in the State during the year under report was 1,839 giving the case fatality rate as 24·7. Relatively large number of deaths were recorded in the districts of Nasik, Panchmahals, Sholapur, Aurangabad, Amreli, Akola and Bhavnagar. The district of Dangs, Surat, Buldana, Chanda, Wardha, Yeotmal,

Ahmadabad and Greater Bombay were free from the disease. Sporadic incidence was reported from the other districts. The disease remained prevalent more or less throughout the year. Usual preventive measures, such as anti-cholera inoculations, isolation and treatment of cases, regular and repeated disinfection of water supply in the affected villages, were undertaken. 22,38,720 anti-cholera inoculations were performed in the affected and threatened areas.

Kerala : The State remained free from the disease during the year under review. 9,386 anti-cholera inoculations were performed.

Madhya Pradesh : There were 43 revenue districts but for medical and public health purposes some of the districts were grouped and named as medical districts numbering 38. During the year under review out of 38 medical districts 15 were affected with cholera reporting 2,160 cases and 632 deaths. Preventive measures such as inoculations, disinfection of wells and other sources of water supply, isolation and treatment of patients were carried out. Special preventive measures were undertaken at important fairs. Emergency cholera regulations were enforced in the infected districts of the State. 7,70,950 anti-cholera inoculations were performed and 7,795 wells were disinfected.

Madras : There was a considerable decrease in the number of deaths due to cholera from 2,312 in 1958 to 206 in 1959. 4 out of 13 districts in the State reported infection and 4,95,013 anti-cholera inoculations were performed.

Mysore : 261 deaths were notified from 5 districts during the year under review as against 2,743 deaths reported from 11 districts during 1958, which was an epidemic year. Maximum deaths were recorded during the month of December and 3,14,107 anti-cholera inoculations were performed.

Orissa : 754 deaths were notified from 10 districts during 1959 as against 7,795 deaths notified from all the 13 districts during the previous year. The number of villages affected during 1959 were 100 as against 1,189 during 1958. Maximum deaths were recorded in June and 14,05,188 anti-cholera inoculations were performed during the year under report.

Punjab : The State was free from Cholera during the year 1959 whereas 33 cases and 9 deaths were reported from 3 districts during the preceding year. 126,853 anti-cholera inoculations were performed during the year under report as against 3,81,208 during 1958.

Rajasthan : 142 cases and 39 deaths were reported during the year under report from Bhilwara and Kotah districts of the State. The peak incidence was reported during October and 183,234 anti-cholera inoculations were performed.

Uttar Pradesh : 645 deaths were reported during 1959 from 4 districts of the State. The months of April to May were the period of peak incidence. 15,38,700 anti-cholera inoculations were performed during 1959 as against 58,12,748 during the year 1958.

West Bengal : 4,156 cases and 1,621 deaths were notified from 12 districts of the State. The maximum incidence was reported during the month of July. The districts of Bankura, Howrah, 24-Parganas and the Calcutta City were heavily affected, whereas sporadic incidence was reported from other districts of the State.

Andaman and Nicobar Islands : This territory was free from the disease and 1,080 anti-cholera inoculations were performed.

Delhi : No incidence was reported during the year under report. However, 6,65,193 anti-cholera inoculations were performed.

Himachal Pradesh : The Union Territory was free from the disease and 4,955 anti-cholera inoculations were performed.

Laccadive, Minicoy and Amindive Islands : The Laccadive Islands were free from the disease during the year under report.

Manipur : Only 3 cases were notified during May, 1959 and 72,821 anti-cholera inoculations were performed.

Pondicherry : 5 cases and 2 deaths were reported during the first week of January, 1959. The Territory remained free during the rest of the year and 7,450 anti-cholera inoculations were performed.

Tripura : 15 cases and 5 deaths were reported from the Territory during the year under review. 76,928 anti-cholera inoculations were performed.

(iv) Malaria

The National Malaria Control Programme, which was started in the country in 1953-54, was switched over to one of the Eradication Programmes from April, 1958 in consultation with the State Governments, International Agencies like USTCM (AID) and W.H.O. etc.

The objective of the National Malaria Eradication Programme is to include all known malarious areas irrespective of the degree of malariousness with a view to covering the entire population and finally eradicating the disease from the country within a fixed time period. The plan of operations envisages establishment of 390 units—230 endemic to cover 230 millions people living in hyper and meso—endemic areas and 160 hypo-endemic units to cover 160 millions people residing in areas which are considered to be comparatively healthier. All these units carry out intensive residual spraying of insecticides in every roofed structure in the areas lying within their ambit of operation. Besides, the plan of operations envisages the establishment of surveillance organisation for detection of malaria cases from house to house visits and radical treatment of the microscopically positive cases and their epidemiological investigations from 1960-61.

During 1958-59 the number of endemic units allotted under the National Malaria Eradication Programme was increased to 230. Actually, however, on account of various administrative difficulties 225·25 units functioned covering a population of 215 millions.

During the year 1959-60, 160 more units were allotted to cover the hypo-endemic or less malarious areas of the country. Out of these 156·75 functioned in addition to 230 endemic units, allocated originally in 1958-59 bringing the total to 386·75 units out of 390 allotted. The other 3·25 units (Kerala—2; Jammu and Kashmir — 1 and Andaman and Nicobar Islands

—0·25) were expected to be established soon. The State-wise distribution of units (endemic and hypo-endemic) functioning during the year 1959 is given in Table No. 7.

During 1960-61, 365 out of the 390 units were to undertake surveillance operations in addition to spraying operations as planned. No surveillance procedure is, however, to be taken up in the other 20 border and 5 problem area units which are mainly located in areas bordering neighbouring countries.

Staff :

As per plan six Regional Co-ordinating Organisations were established under the Centre to co-ordinate the activities of the States with the Centre and located at Shillong, Cuttack, Baroda, Hyderabad, Coonoor and Delhi, each region having its ambit of operation over 2 to 3 States. Most of the regional staff was appointed. Each region has a Deputy Director, one Assistant Director (Medical) and one Assistant Director (Entomology) besides technicians, ministerial and anciliary staff. While the Deputy Directors and Assistant Directors (Medical) were to visit the units to study the progress of eradication, independent appraisal and epidemiological investigations etc., the Assistant Directors (Entomology) were to undertake special type of entomological investigations like determination of susceptibility status of vector survival rate, age composition of vectors etc. Each region is provided with 3 vehicles. *Pari pasu* necessary augmentation was made in the headquarters National Malaria Eradication Programme staff as well.

Training :

It was estimaed that 1,50,000 personnel of all categories *viz.*, Medical Officers, Inspectors, Technicians, Spray Workers, Surveillance Workers etc., would be required for this programme. For this purpose training facilities at the Malaria Institute of India, Delhi were augmented and the number of courses held in a year was increased. The number of seats in different courses at the said Institute was also raised from 30 to 50. Similar courses for Malaria Inspectors and Technicians were also held at the Regional Co-ordinating Organisations and State Training Centres.

The expenditure on National Malaria Eradication Programme during the last 3 years of the Second Five Year Plan period was estimated to Rs. 43·57 crores; out of this the estimated expenditure for 1959-60 was Rs. 14·52 crores (Rs. 9·98 crores by the Centre and Rs. 4·54 crores by the States). The Central Government sanctioned budget for 1959-60 amounting to Rs. 9·14 crores including U.S.T.C.M. assisted mostly for material and equipments.

Co-ordination Committees :

A high level Adiministrative Committee and a Special Working Committee were constituted at the Centre, the former for reviewing the administrative problems and the latter for guidance in technical matters connected with the implementation of the eradication programme. In the States it was recommended that there should be a high level Working Committee to expedite decision on any problems arising in connection with the implementation of the programme and for co-ordination of operations. Such high level Working Committees were constituted in 17 States.

W.H.O. Teams :

Two advisory teams were functioning one at Baroda and the other at Coonoor [latter shifted to Bankura, West Bengal in January, 1960] and engaged in special investigations. Besides, one W.H.O. Experimental Surveillance Study Team is functioning in the Mysore State.

The annual meetings of malaria workers were held during December, 1959 at Jaipur and nearly 500 malaria workers participated from all over the country. Besides plenary sessions, discussions were held at group levels regarding the progress of malaria eradication and difficulties experienced and recommendations were made for plan of operations.

In order to co-ordinate anti-malaria activities at the Indo-Burma border, Third Indo-Burma Border Anti-malaria Co-ordinating Conference was held at Aijal (Assam State) from 23rd to 25th November, 1959.

Health Education and Public Relations :

During the year, April 1959 to March 1960, considerable attention was paid to the various aspects of health education and publicity for malaria eradication programme.

A brochure 'Malaria in India', prepared by the Central Organisation of the National Malaria Eradication Programme, was published by the Central Health Education Bureau of the Dte. General of Health Services, New Delhi in October, 1959.

A poster showing the surveillance aspects of malaria eradication was produced and issued by the Central Health Education Bureau of the D.G.H.S., New Delhi.

All efforts were made by the National Malaria Eradication Programme, to secure wide publicity for the programme in the daily and periodical press of the country through the use of official and non-official agencies.

Estimated Population Protected :

Out of 390 malaria eradication units, which were expected to function during 1959-60, 3·25 as stated earlier could not start functioning during the year under report. It is estimated that 386·75 units, which functioned, afforded protection to a population of 361·35 millions, including Railways and Tea Estates. However, all of them had not received complete protection as all the houses sprayed did not receive the prescribed number of rounds for spray and two rounds in most cases. Out of 361·35 millions people protected in the country, 334·05 millions (*i.e.* 92·5 per cent) afforded complete protection. The corresponding percentage during 1958-59 was 72·4.

Epidemiological Surveys :

According to instructions contained in the Manual of Malaria Eradication each unit has to examine 20,000 and 10,000 children respectively for the determination of child spleen and parasite rates. The sample for computing infant parasite rate is 1,000. The percentages of target covered for three indices were 84·6; 60·8 and 89·7 respectively during 1959-60 while the corresponding percentages during 1958-59 were 75·9; 17·9 and 56·4 respectively. The child spleen, child parasite and infant parasite rates were recorded to be 1·4; 0·16 and 0·14 respectively during the year under report. The corresponding figures during 1953-54, the first year of the National

Control Programme and the percentages of reduction during 1959-60 are as given below :—

Categories	1953-54	1959-60	Percentages of reduction
(i) Child Spleen Rate	15·7	1·4	91·1
(ii) Child Parasite Rate	3·9	0·2	94·9
(iii) Infant Parasite Rate	1·6	0·1	93·8

The epidemiological indices for the various States in India are presented in Table No. 8.

Malaria Morbidity as reported by Hospitals and Dispensaries :

The proportional case rate of malaria (percentage of clinical malaria cases to all diseases as reported by hospitals and dispensaries) was reduced from 18·8 during 1953-54 to 4·0 during 1958-59, the first year of the National Malaria Eradication Programme. This was further reduced to 2·4 in 1959-60, showing thereby the reduction of 78 per cent as against 18·8 during 1953-54. The number of clinical malaria cases and all diseases reported from hospitals and dispensaries are given in Table No. 9.

Susceptibility to anopheline mosquito to insecticides :

Susceptibility tests were systematically carried out throughout the country. So far only 2 cases of resistance in vector species and 3 in nonvector species were reported.

(v) Dysentery and Diarrhoea

As the figures for Dysentery and Diarrhoea are not available separately, two diseases have been grouped together in Table No. 10, which shows the percentages of deaths due to these two diseases to total deaths and the death rates per mille of population during the years 1958 and 1959. According to the registered deaths, there was a slight decrease in the death rate from 0·56 in 1958 to 0·46 in 1959.

It will be observed from the aforesaid table that the percentage of mortality due to Dysentery and Diarrhoea to total deaths is as high as 12·50 in the Union Territory of Himachal Pradesh and as less as 1·30 in Bihar State. These diseases also accounted for a large percentage of deaths in the States of Assam, Kerala, Madras, Mysore, Andaman and Nicobar Islands and Pondicherry. The highest death rate due to Dysentery and Diarrhoea was recorded in Pondicherry (2·41) followed by Mysore (1·00), Himachal Pradesh (0·92), Madras (0·90 and Orissa (0·80). On the other hand the least death rate *i.e.* 6·06 per mille of population was reported from the States of Bihar and Manipur.

The situation regarding the prevalance of these two diseases in the various States of India is given below :—

Andhra Pradesh : 13,737 deaths were recorded as against 17,796 deaths during 1958. 79 per cent of the total deaths were reported from rural areas of the State.

Assam : 3,515 deaths were reported in 1959 as against 3,377 deaths during the previous year.

Bombay : 35,899 deaths were reported during 1959 as against 6,697 deaths in 1958.

Kerala : 7,588 deaths due to these diseases were reported during the year under report.

Madras : The number of deaths decreased from 34,406 in 1958 to 29,033 in 1959.

Mysore : 16,081 deaths due to these diseases were reported during the year 1959.

Punjab : The total number of deaths recorded during the year under review was 6,920 as against 7,882 during 1958.

Tripura : 74,337 deaths were reported during the year 1959.

(vi) Respiratory Diseases

The group of diseases under this heading includes some important causes of deaths like T.B., Pneumonia, Bronchitis, etc. Due to lack of proper diagnostic facilities in the country, deaths from these specific diseases cannot be shown separately. During 1959 and 1958, there were 332,432 and 338,799 deaths under this group of diseases giving 9·09 and 9·38 per cent of the total deaths respectively. Table No. 11 shows the percentages of deaths due to respiratory diseases to total deaths in various States of India during the year 1959. There is a large variation in the mortality recorded due to respiratory diseases among the States. For instance, Delhi recorded the highest percentage (21·69) followed by Pondicherry (17·00), Rajasthan (16·65), Bombay (14·11), Punjab (14·03), Kerala (10·91), Madras (10·32), Manipur (10·26), Mysore (9·88), Uttar Pradesh (9·82), Andaman and Nicobar Islands (9·19), Assam (8·35), Madhya Pradesh (6·91), Himachal Pradesh (6·89), Andhra Pradesh (6·70), Orissa (2·89) and Bihar (1·47). Information for the States of Jammu and Kashmir, West Bengal and the Union Territories of Laccadive Islands and Tripura was not available.

(vii) Other Notifiable Diseases

In addition to the routine statistics collected from all parts of the country, statistics on certain communicable diseases, which are declared "notifiable" to the health agency is also collected. Apart from the six "quarantinable" diseases such as cholera, small-pox, plague, relapsing fever, yellow fever and typhus; certain diseases are also declared notifiable by the State Health Authorities. A list of such diseases in different States during 1959 is shown in Table No. 12.

Typhus : Typhus is one of the six quarantinable diseases. Information from several States was not available due to lack of diagnostic facilities. The available information reveals that Assam, Tripura and Pondicherry recorded 48, 81 and 7 deaths respectively. The States of Bombay, Punjab, Rajasthan and Himachal Pradesh were free from the disease.

Kala-azar : 431; 99; 2 and 3 deaths due to Kala-azar were reported from the States of Tripura, Assam, Madras and Bombay respectively. Out of 3 deaths reported from Bombay State two were recorded in Greater Bombay. The States of Rajasthan and Pondicherry were free from the disease.

Enteric Fever : Information on Enteric Fever was available only from some States in the country. The States of Andhra Pradesh, Assam, Bombay, Madras, Punjab, Rajasthan, Manipur, Tripura, and Pondicherry recorded 458; 151; 5,345; 486; 2,208; 243; 1,208; 1,161 and 32 deaths respectively. Information in respect of Andhra Pradesh and Rajasthan States relates only to urban areas.

Cerebrospinal Fever : The number of deaths due to cerebrospinal fever were reported only from the States of Assam, Bombay, Punjab, Rajasthan and Pondicherry. 38; 137; 36; 30 and 10 deaths were reported from the above States respectively. Information from the other States was not available.

(viii) Venereal Diseases

Venereal Diseases in India are of major public health importance. In the Second Five Year Plan period a scheme was included for the control of these diseases. The main objective of the scheme was to establish adequate number of diagnostic and treatment centres for Venereal Diseases' patients. An Adviser in Venereal Diseases was appointed in the Directorate General of Health Services, New Delhi in November, 1957 to implement the Venereal Diseases Control Scheme and to co-ordinate the V. D. control activities of the different States in India.

The over-all problem of venereal diseases during 1959 remained more or less the same as in previous years.

The main efforts in regard to control programme were based on the implementation of the proposals under the Second Five Year Plan period, which aimed at establishing more clinics in the country for providing adequate facilities for diagnosis and treatment. In the establishment of these clinics, stress was also made for the incorporation of epidemiological and educational programme. In pursuance of the above programme 8 V. D. Clinics were established under the plan scheme in the following States:—

States	V. D. Clinics
1. Andhra Pradesh	3
2. Madras	2
3. Mysore	2
4. Punjab	1
TOTAL	8

The total number of V. D. Clinics established under the Second Five Year Plan period upto the end of the year under report was 53. Free supply of PAM and VDRL antigen was extended to these clinics.

Assistance was given to Association for Moral and Social Hygiene in India for the establishment of a V.D. Clinic in Delhi.

The number of V.D. patients treated in-door and out-door in different classes of the Hospitals and Dispensaries of the States excluding Andhra Pradesh, Assam, Bihar, Gujarat and Jammu & Kashmir during the year 1959, was 6,50,637. The State-wise distribution of cases treated is given in Table No. 13.

Refresher courses for V.D. workers continued at the V.D. Training Centre, Safdarjang Hospital, New Delhi-16 and at the Institute of Venereology, Government General Hospital, Madras. 33 doctors and 6 para medical personnel underwent such training. In addition two Medical Officers took the diploma in Venereology at the Institute of Venereology, Madras.

In September, 1959, a short-term intensive campaign against venereal diseases was launched in the Kulu Sub-division of the Punjab State. Sereological surveys in this area had shown a 30 per cent reactivity. The programme included a blanket treatment of the entire population in the area by giving the optimum dosage of PAM in one injection. Over 60 per cent of coverage was achieved in terms of population and the subsequent surveys have shown not only a considerable reduction in sero-positivity rate but also in the incidence of clinical syphilis. Results of this project were further watched; 60 teams, which were required for the programme, were mobilised by the Punjab Health Administration. The large quantity of PAM required for the programme was supplied by the UNICEF on the advice of WHO. Concurrent Anti-V.D. campaign was also launched in the adjoining areas of Himachal Pradesh where the original sero-positivity rate was 23·9 per cent. In these areas periodical resurveys are being carried out by the V.D. Organization of Himachal Pradesh.

More V.D. Laboratories have adopted the VDRL test as the single test of choice in routine serology. More blood tests were carried out in ante-natal cases.

Data was collected on the facilities for treatment of venereal diseases amongst merchant seamen at Ports in the country with a view to work out a uniform system.

Of the 8 Headquarters Clinics and 75 District Clinics, proposed to be established in the Second Five Year Plan period, 53 Clinics were established upto the end of 1959, the distribution of which is as follows:—

States	Headquarters V.D. Clinics	District V. D. Clinics	Total
1. Andhra Pradesh	1	12	13
2. Assam	1	—	1
3. Bihar	1	7	8
4. Kerala	—	2	2
5. Madras	—	10	10
6. Mysore	—	3	3
7. Punjab	—	1	1
8. Uttar Pradesh	—	2	2
9. West Bengal	—	2	2
10. Himachal Pradesh	—	9	9
11. Tripura	—	1	1
12. Andaman and Nicobar Islands	—	1	1
TOTAL	3	50	53

Note:(—) Nil informatinon.

Consideration was given in this respect to areas having high incidence of V.D. and to integrate both the curative and public health aspects in the control of these diseases.

The clinics are staffed and equipped with on an approved pattern. Methods of diagnosis and treatment are also on modern and uniform lines. The Central Government meet 75 per cent non-recurring and 60 per cent recurring expenditure.

The total number of V.D. cases treated in these clinics in 1959 were 43,426 of which 73·78 per cent were males, 24·68 per cent females and 1·53 per cent children. Among children more than 50 per cent were suffering from congenital syphilis. The State-wise distribution of the different types of V. D. patients treated at these clinics during 1959 is given in Table No. 14. Contact tracing and other cases finding measures were stressed in these clinics. Routine ante-natal blood testing for syphilis and treatment of positive cases at local Maternity and Child Health Centres were encouraged.

In addition to above clinics, six V.D. Clinics were established by the Madhya Pradesh Government under the Tribal Welfare Scheme and two clinics were set up in Himachal Pradesh under the same Scheme.

The Social and Moral Hygiene Association in India established V.D. Clinics in Delhi in 1959. Training facilities and free supply of PAM (Penicillin) were extended to this Unit.

Penicillin (PAM) worth Rs. 50,000 was purchased locally and supplied to the V.D. Unit during 1959.

The V.D. Training and Demonstration Centre, Safdarjang Hospital, New Delhi-16 continued to function efficiently during the year under report. As in the previous year, Refresher Training Courses were conducted and consultative services extended to all the Contributory Health Service Scheme Dispensaries and other Hospitals.

Special studies on some clinical problem, laboratory and socio-economic aspects of V.D. were conducted. Consultation, treatment and laboratory facilities were given free to all patients in the Unit.

The number of new and old cases attended the Centre during 1959 were as follows :—

Category	Adults		Children	
	13 years and above		12 years and below	
	Males	Females	Males	Females
(i) New	1,437	556	104	93
(ii) Old	6,272	1,678	128	162
TOTAL .	7,709	2,234	232	255

A total of 6,844 blood samples were tested for syphilis.

The following table shows tests, other than the above, done during the year under report:—

Description	Number tests
1. Cerebrospinal fluid (STS)	279
2. Cerebrospinal Fluid	125
3. Dark field for T. P.	354
4. Dark field for T. V.	755
5. Smear for G. C.	1,799
6. Smear for Ducxy's Bacilli	14
7. Smear for Denovan Bodies	7

Training facilities were also extended to students of the College of Nursing, Lady Reading Health School, Orientation Training Centre, Najafgarh and Vallabhbhai Patel Chest Institute, Delhi-6.

The State-wise activities carried out for the control of veneral diseases are summarised below :—

Andhra Pradesh : The Venereal Department of King George Hospital, Visakhapatnam had dealt with 322 new cases of V.D. as in-patients and 3,362 new cases of V.D. as out-patients. The cases of syphilis and acute gonorrhoea were treated with PAM which was supplied free by the Directorate General of Health Services, New Delhi and the cases of chronic gonorrhoea, donovonosis and late lymphogranuloma with broad specturum antibiotics drawn from the hospital.

With the help of the two special workers of the hospital and the medico-social worker of the V. D. Clinic it has been possible to increase the efforts in taking preventive measures within the city units by way of case finding contact investigation etc.

The Government sanctioned the opening of one V.D. Clinic in the Second Five Year Plan Scheme in Government Headquarters Hospital, Nellore. Consequent on the appointment of a woman Medico-Social Worker, families of the patients, other fresh contacts and sources of infection, were adequately treated to check the prevalence of these diseases. One V.D. Clinic attached to the Headquarters Hospital, Mahbubnagar, started functioning in the year 1959.

Assam : For proper control of V.D. in the State a Central V.D. Clinic, attached to the Assam Medical College, Dibrugarh continued to function during the year 1959. Certain District V.D. Clinics also continued to function. Construction work of certain more District V.D. Clinics were also under progress.

Bihar : There were 7 V.D. Clinics functioning at the District Headquarters at Darbhanga, Muzaffarpur, Monghyr, Bhagalpur, Arrah, Gaya and Dhanbad. These clinics functioned well under the Veneriologist and other staff. Serological and other pathological tests were done at the Public Health Laboratories established at the District Headquarters.

A 24 bedded V.D. Ward, attached to the Darbhanga Medical College Hospital and 50 bedded to Patna Medical College Hospital, were functioning efficiently. In these two units services of specialists were also available to the V.D. patients. During 1959-60, no new V. D. Clinic was established.

Kerala : The V.D. Clinics started in the previous year attached to Hospitals continued functioning during the year under review. 26,249 cases of syphilis and 27,112 cases of gonococcal infection were treated.

Madras : The Public Health Department carried out educative propaganda on the prevention of venereal diseases. A venereal diseases clinic and a serological laboratory run by the Municipal Council, Madurai, continued their activities, which included diagnosis and treatment of cases, screening of contacts, follow up of cases and their contacts in their homes.

A total of 153 home visits were made. 124 of the 243 contacts, brought forward for examination and treatment, were found to be positive for syphilis. Fresh cases had increased during 1959. But the percentage of cases of syphilis was less than that in the year 1958. The incidence of chancroid was also less while gonorrhoea was on the increase. PAM was given for syphilis and gonorrhoea treatment. Streptopenicillin, Streptomycin and other broad spectrum antibiotics were given for venereal granuloma.

Madhya Pradesh : Facilities for the treatment of cases, suffering from venereal diseases, existed in all hospitals and dispensaries in the State. Besides, special UNICEF assisted V.D. Unit at Ambikapur and 7 special Clinics at Gwalior, Indore, Bhopal, Satna, Chhatarpur, Datia and Shahdol also existed with all serological diagnostic and treatment facilities.

In addition to the above, six more V.D. Clinics under Tribal Welfare Department Scheme were established in different districts of the State.

The total number of V.D. cases treated in various hospitals and dispensaries together with cases treated in special clinics mentioned above was 35,573.

Mysore : There were 7 V. D. Clinics and Wards in the entire State for free treatment of venereal diseases. Syphilis and gonorrhoea are the commonest of venereal diseases met with and granuloma inguinale was the rarest. Apart from the clinics, patients were also treated as out-door patients in almost all the medical institutions in the State.

The following table indicates the comparative figures for 1958 and 1959 for the State of Mysore :—

Years	No. of V. D. Clinics and Wards	No. of beds provided	No. of in-patients treated in all the Institutions	No. of out-patients treated in all the Institutions
1958	5	42	3,060	89,477
1959	7	49	3,313	80,604

Orissa : 28 beds were set apart in S.C.B. Medical College Hospital, Cuttack for treatment of venereal diseases. This is a regular clinic attached to the said hospital. Clinics were also organised in two District Headquarters Hospitals and three other important hospitals for treatment of V.D. cases.

Punjab : The following Venereal Diseases Clinics and Departments had worked in the Punjab State :—

(a) V.D. Team, Kulu (Mobile Clinic).

(b) V.D. Stationary Clinic, Kulu.

(c) V.D. Hospital, Kandaghat.

(d) V.D. Clinic, Dharampur.

(e) V.D. Department, V. J. Hospital, Amritsar.

In view of the Anti-V.D. campaign (Blanket treatment) the field work was suspended from May, 1959 and the teams were busy with the preparatory phase of the Anti-V.D. campaign which commenced from September, 1959. 45 Dispensaries, 18 Sanitary Inspectors, 6 Lady Health Visitors and V.D. Team worked under the guidance of 20 doctors and supervisory staff. The campaign was over by December, 1959 and 77,413 persons (adults and children) were given PAM injection. Surveillance work continued during the period under review.

Rajasthan : From the returns of hospitals and dispensaries it appeared that the incidence of V.D. was declining. There was no separate Hospital or Clinic for the treatment of V.D. The following hospitals were provided with V. D. Clinics/Departments and beds as noted against each :—

Hospitals	Clinic	Beds
1. Sawai Man Singh Hospital, Jaipur	1	14
2. Mahatma Gandhi Hospital, Jodhpur	1	14
3. P. B. M. Main Hospital, Bikaner	1	10
4. Victoria Hospital, Ajmer	1	—

The total number of V.D. patients treated in all the State Public Hospitals and Dispensaries was 17,349 out-door and 621 in-door during the year under review.

Uttar Pradesh : 2 Venereal Diseases Clinics and one V.D. Mobile Unit functioned in Uttar Pradesh during the year under review. The work of random sample survey for V.D. was started in the whole of Jaunsar Bawar area of Dehra Dun district and the adjoining areas of Tehri-Garhwal district.

West Bengal : 16 new V.D. Clinics were opened during 1959 and the total number of such Clinics rose to 39. Out of these clinics two were exclusively for females. In this year it has been possible to provide all the Sadar Hospitals, excluding that of Purulia district, with V.D. Clinics. Facilities for treatment of V.D. cases were also available in different hospitals.

A mobile V.D. Unit functioned at Siliguri. This institution was mainly meant for the tribal people.

There is a Serological Laboratory (V.D.) attached to Blood Bank, Calcutta, where blood samples were tested as a routine measure. These tests in the districts were done in V.D. Clinics.

Himachal Pradesh : The V. D. Control Programme was started with the assistance of WHO Venereal Diseases Demonstration Team in 1949 and the team was withdrawn at the end of 1951. Since then, the Organisation is under the Medical and Public Health Department of this Administration.

At the close of the year under review, there were 6 V.D. Clinics and 3 V.D. Units and these units were started during the year 1959 under the Social Welfare Schemes in tribal areas. The anti-V.D. work was done in the V.D. Clinics which offered free examination and treatment to all patients attending the clinics.

The Venerologist, Himachal Pradesh also started Anti-V.D. campaign in the adjoining areas of Kulu Valley (Punjab). The activities of the V.D. Teams afforded treatment of the V.D. cases of Himachal Pradesh at the doors of the patients. The progress of the work during 1959 is as follows:—

Categories	Total cases seen	New V. D cases treated	Total blood tests done	Positive cases
(i) Clinics	54,814	4,183	31,802	7,623
(ii) Field	22,893	5,009	22,893	4,974

Pondicherry : 2,800 out-patients were treated at V.D. Clinic during the year 1959. Out of these, 635 persons were kabu positive and 13 cases of venereal lymphogranuloma were detected.

Andaman and Nicobar Islands : The incidence of veneral diseases is quite low in this territory except for Car Nicobar group of Islands. A scheme with a capital outlay of Rs. 0·76 lakh, exclusively for V.D. treatment in Nicobar, was included in the Second Five Year Plan period of these Islands and was implemented. 641 V.D. cases were given treatment at Car Nicobar group of Islands.

(ix) Leprosy

Leprosy is an ancient disease. Anti-leprosy work in India is mostly carried but by the Voluntary Organisations. During the post-independence period, the Government of India have taken up the problem with keen attention.

Leprosy is widely spread in India. The areas of high prevalence (five or more cases per thousand of population) are mostly found in Southern part of the country, although some areas of Central and Eastern zones are not free from high incidence. The areas of moderate prevalence (one to five per thousand) are usually found in Central and Western zones of the country and in the Himalayan foot hills. The areas of North-Western part of the country are either of low prevalence *i.e.*, below one per thousand or are free from the disease. Out of about 2 million persons suffering from leprosy, nearly half a million are of infections type.

The Government of India established Central Leprosy Teaching and Research Institute, Chingleput, Madras for training of leprosy workers and for conducting research on problems of leprosy. The Government of India also established Control Centres under National Leprosy Control Programme. Upto the end of the year 1959, 100 such Centres were established and a total population covered by these Centres was 12·8 millions, of which nearly 4·9 millions were examined during the year under review. 76,374 cases were detected as suffering from leprosy. Further, nearly 89,000 patients were under treatment. The object of the programme is to give modern treatment to persons suffering from leprosy. The recurring expenditure is shared by the State Government and the Government of India on 50:50 basis and the State Health Directorates are directly responsible for proper functioning of these Centres. The Government of India also render financial assistance to the Voluntary Organisations doing leprosy works.

Under the auspices of the Indian Council of Medical Research, New Delhi, leprosy research work was carried out in various important leprosy institutions in the country. The activities carried out by the various States in respect of anti-leprosy work are summarised as follows :—

Assam : A 30 bedded hospital with necessary clinic facilities continued to function for treatment of leprosy patients. There were some leprosy colonies as well. Liberal subsidy was given by the Government to the institutions run by the Local Bodies and the Voluntary Organisations.

Bihar : 18 Leprosy Subsidiary Centres, two Lepers Asylums and one Leprosy Institute were functioning in this State. Besides, there were 12 non-Government Leprosy Asylums and Clinics and were actively functioning in those areas, where the incidence of leprosy was pre-dominant. The provision existed for indoor beds at the Rajkumari Leper Asylum, Deoghar, K.E.M. Leper Asylum, Gaya and Leprosy Institute at Brambe, Ranchi.

Bombay : 1,354 deaths due to leprosy were registered in the year 1959 as against 1,623 in 1958. With a view to provide treatment facilities as many as 70 S.E.T. Units were established during 1959. In addition to, there were 15 Leprosy Homes with 3,098 beds run by Private Voluntary Organisations for which Government gave grant-in-aid. There were also 19 Leprosy Subsidiary Sub-Centres functioning in the State. According to revised leprosy plan, grant-in-aid for conducting Out-patient Department treatment, up-grading the institutions and for rehabilitation, were sanctioned to some Voluntary Organisations engaged in anti-leprosy work.

The State Government in collaboration with the Government of India started a training course in anti-Leprosy work in Medical College and Hospital at Nagpur during the year under report.

Kerala : Preventive aspect of leprosy was given due place and a plan for control of leprosy was drawn up and measures were taken for its implementation. The important features of the plan are the survey, education and treatment on a mass scale. Training programme for doctors for doing leprosy work was also started during 1959.

Madras : The Clinics, Treatment and Subsidiary Centres etc., run for the treatment of leprosy cases, were under the administrative control of the Medical Department. The public health staff carried out surveys for the

detection of leprosy cases. The health education of the public and the mode of spread of the leprosy infection was undertaken and the need of seeking early institutional treatment of leprosy cases was impressed upon the patients, who were detected as suffering from leprosy. The Leprosy Centre at Veeraperamanllur and the four Leprosy Centres one each at Perambalur, Tiruvellore, Tiruchuli and Kodaemudi were opened. The comprehensive leprosy relief and control scheme for Wallajjh Táluk with 16 sub-centres was sanctioned. 1,08,250 cases were treated in the State during 1959. There were 3,880 new cases of leprosy. Treatment was carried out with oral D.D.S. as a routine in all cases.

Madhya Pradesh : There were 119 Out-patient Leprosy Clinics, of which 16 were special clinics *i.e.* the clinics under specially trained Assistant Health Officers (Leprosy); while other 103 clinics were attached to various hopsitals and dispensaries. Out of the 10 in-patient institutions for treatment of lepers, 5 were run by the State Government and 5 by the Mission to Lepers. Besides, one Study-*cum*-Treatment Centre at Raipur, 3 Subsidiary Centres at Chamba, Sausar and Sahapur and one Leprosy Pilot Project at Rewa functioned during 1959. A Leprosy Hospital under the Tribal Welfare Department Scheme was established at Dhar. In the survey of the project area, 133 new cases were detected. Two Medical Officers were deputed for training at the Medical College, Nagpur under the auspices of the Central Government Training Scheme during 1959.

Mysore : There were 4 well equipped leprosy institutions in the entire State of Mysore. In addition to these institutions, leprosy patients were also treated as out-door patients in some of the major medical institutions. After the cases are diagnosed they are usually referred to leprosy institutions for further treatment where tissue nasal smear examinations are made for all suspected patients. 434 beds were provided in 4 leprosy institutions, where 1,109 cases were treated as in-door patients and 2,831 as out-door patients. The number of patients treated in all the institutions in Mysore State was 7,355. There were 7 leprosy centres functioning in the State. In Bangalore, there is a Central Leprosarium with 200 beds which caters to the needs of the entire State.

Orissa : 352 Leprosy Clinics, including clinics attached to General Hospitals and dispensaries, functioned in the State. 1,067 beds were available in different Hospitals, Colonies, Asylums and settlements. The Hind Kusht Nivaran Sangh maintained 22 domiciliary treatment Centres covering 2·9 lakh of people. From these Centres 1,850 patients received domiciliary treatment by the end of 1959. Out of 4,57,290 people examined, 4,705 cases were detected to be suffering from leprosy during the year under report.

Punjab : Out of two Leprosy Subsidiary Centres allotted to Punjab State in the Second Five Year Plan period, Leprosy Subsidiary Centre, Kandbarri started survey in September, 1959 in the project area of Palampur Tehsil and examined 5,338 persons of whom 10 persons were detected to be suffering from leprosy.

Under Special Leprosy Survey of Lahoul and Spiti area, 5,96,772 persons were examined and 15 of them were found to be suffering from leprosy. Other clinics functioning in the Kangra District detected 33 new cases during 1959. Patients were treated with sulphone in Leprosy Clinics.

Domiciliary treatment in the project areas was started. The survey parties, apart from their survey and treatment work, gave health education on leprosy to the villagers.

Rajasthan : Leprosy is not a major problem in this State as it is revealed by a limited survey carried out in Jodhpur Division of the State.

Two Leper Asylums were functioning in the State *viz.*, one at Jaipur with 40 beds and the other at Jodhpur with 55 beds. Besides, treatment was also given to out-door patients in all the hospitals and dispensaries of this State. Institutions during 1959 was 1,002 as against 1,163 during the preceding year. No work was reported to be done by any Leprosy Mission or Association in this State during the year under report.

Uttar Pradesh : According to the Report of the Committee for Control of Leprosy set up by the Government of India, there were about 15 lakhs leprosy patients in India of whom the State of Uttar Pradesh had about 80,000. The incidence was particularly high in the Eastern districts and Himalayan foot hill region of the State.

18 Leprosy Institutions were functioning in the State with a total bed strength of 1,484 which provide facilities to lepers for extensive treatment and combating the disease. Out of these, leprosy hospitals at Bahraich, Meerut and Varanasi were State owned and the remaining 15 were managed by private organisations. A sum of Rs. 2,60,000 was given as grant-in-aid to these institutions. 8 Subsidiary Leprosy Control Centres and one Study and Treatment Centre were also functioning to control the disease. Arrangement was made for providing treatment facilities in all District Hospitals and outlying branch dispensaries. Five Leper Homes were run to maintain the health of the children of the lepers.

West Bengal : There were 125 institutions of which 116 were clinics and the rest were house hospitals, colonies and segregations camps. Besides, facilities for treatment of leprosy patients were available in Government General Hospitals and Health Centres. 2,384 beds were available for treatment and segregation of leprosy cases. Of these 764 were maintained by State, 1,202 by Missionary Associations, 418 by Local Bodies. 86,167 leprosy patients were treated. Facilities for physiotherapy, plastic and orthopaedics surgery were available for leprosy cases at Purulia and Gouripur. A sum of Rs. 15,96,844 was spent on anti-leprosy work of which Rs. 6,12,900 were spent directly by the State Government.

The Hind Kusht Nivaran Sangh (Paschim Bangiy Shakha) carried out survey on leprosy at 3 Centres, two in the Malda district and one in Midnapur district. Arrangements were also made for establishment of an After-care-Colony for negative leprosy patients.

Andaman and Nicobar Islands : There was no hospital exclusively for treatment of leprosy and the need for the same was not felt as the number of leprosy patients was negligible in this Territory. There were 7 cases in 1959 as against 4 cases during the previous year. Patients suffering from leprosy were admitted to Isolation Ward attached to Bambooflat Hospital, Port Blair.

Himachal Pradesh : Before the formation of this Territory, there were only two leprosy institutions at Mandi and Chamba. During the First Five Year Plan period, a Leprosy Subsidiary Centre was started at Mashobar

near Simla with an in-door accomodation for 30 patients. Similarly, during the Second Five Year Plan period, two more Subsidiary Centres were started at Mandi and Nahan. Each of these Subsidiary Centres was having 4 to 5 sub-units to conduct survey and domiciliary care. Free diet was supplied to all the leprosy patients in the above mentioned leprosy units.

Besides, 5 more Leprosy Sub-units started functioning under the Social Welfare Scheme in the Scheduled Tribe areas of the Territory. Since the Leprosy and V.D. Organisations have been combined the lepers were also being examined for AFB etc., and those, who required hospitalisation, were sent for admission to the Leprosy Institutions.

Pondicherry : In the Leprosy Hospital 170 patients were treated as in-patients of whom 116 were males, 49 females and 5 children. In the Leprosy Out-patient Departments of the General Hospitals, 227 lepromatous and 693 non-lepromatous cases were attended to during the year under report.

(x) Blindness and Eye Diseases

Of all the countries in the world the incidence of blindness in India is the heaviest. In India, there are two million blind people as against 10 million in the world as a whole. More than half of the world's blindness is preventible and the eye diseases, if detected and treated early, are curable. The major causes of blindness are smallpox, trachoma, leprosy, venereal diseases, ophthalmia neonatorum and the effects of the malnutrition. Poverty, ignorance and apathy are the main causes of blindness in rural areas.

Since independence the welfare of the blind has been engaging the attention of the Government of India and the State Governments in a large measure. A grant of Rs. 38,400 was paid to the Gandhi Eye Hospital during 1959-60 for providing training facilities to the post-graduate students of the Institute of Ophthalmology, Aligarh. A grant of Rs. 7,500 was also sanctioned to the Gandhi Eye Hospital during the fiscal year 1959-60 for making additions to the Animal House for purposes of research on the grafting of dogs' corneas into human eyes. In addition, a grant of Rs. 40,000 was paid to the Muslim University, Aligarh during 1959-60 to meet the expenditure of the Institute of Ophthalmology, Aligarh.

The Blind Welfare Work has been divided into two categories *viz.*, (1) Prevention and cure of blind and (2) Welfare and education services for the rehabilitation of the blind.

Pilot Project for Trachoma Control :

On the recommendation of the Trachoma Sub-Committee of the Indian Council of Medical Research, the Trachoma Control Pilot Project was started as a joint programme of the Government of India and the World Health Organisation in October, 1956, under the administrative and technical control of the Indian Council of Medical Research, New Delhi.

During 1956 to 1958, epidemiological surveys (random sample surveys and general systematic surveys) were undertaken in Aligarh district of Uttar Pradesh and Mass Treatment Programme initiated in Aligarh and Sitapur districts of Uttar Pradesh.

During 1958-59, the activities were further extended to other States with the following objects:—

(i) Pre-school Age Children Treatment Programme in Jaipur, Rajasthan;

(ii) Primary School Children Treatment Programme in Patiala District, Punjab; and

(iii) Preparation of Topographical Map of India on Trachoma.

During this period the surveys for the topographical map were initiated in the States of Bombay, Orissa, Andhra Pradesh, Kerala, Madras, Mysore, and Madhya Pradesh.

During 1959-60, the activities initiated during 1958-59, were continued. The survey work for the topographical map was taken up in the States of Bihar, West Bengal, Assam and Jammu and Kashmir.

The project has been further extended to carry on initial phase of the mass campaign in the States of Uttar Pradesh, Rajasthan, Punjab, Madhya Pradesh and Bihar with the object of studying the methodology for mass campaigns and the administrative set up necessary for the same, which could be economical and practical under the present situations prevailing in the country.

Important activities in respect of curative and preventive services for eye diseases in various States are as detailed below:—

Andhra Pradesh: Under the Second Five Year Plan Schems, the State Government sanctioned opening of an eye clinic in the Government Headquarters Hospital, Nellore, which started functioning during the year 1959. Trachoma forms about 15 per cent of the eye patients mostly from the lower income groups. The total number of trachoma cases treated during 1959 was 2,167 in the out-patient department and 820 as in-patients.

Assam: There was no separate eye hospital in the State. One Ophthalmology Department in the Assam Medical College, Dibrugarh rendered treatment of eye diseases. In certain districts hospitals, honorary visiting Surgeons worked for treatment of out-door eye cases and possible medical facilities were made available to the patients.

A trachoma survey was also carried out at the request of the Government of India through Indian Council of Medical Research, New Delhi. The survey had since been completed and the survey report was also communicated to the Government of India and now the Government of India will decide whether a trachoma project is to be established.

Bihar: Eye relief work was organised at different places in the State through official as well as non-official agencies. Eye Relief Camps were held at Gaya, Ranchi, Arrah, Bettiah, Madepur, Saharsa Monghyr and at Government Hospitals located thereat. Relief work was organised at these places through Blind Relief Camps sanctioned exclusively for this purpose. The duration of the camps varied from one month to four months according to local necessity.

Societies and Charitable Organisations also organised eye relief work at different places. The Blind Relief Camps were organised at different places, through the agencies of the Gram Panchayats, with State Government assistance.

The random survey of the prevalence of trachoma in the State started during 1959. After the survey work was completed the treatment programme was also initiated during the year under review at Fatwah Block in the Patna district.

Kerala : One Ophthalmic Hospital, exclusively for eye diseases, catered to the needs of the eye patients in the State and separate units attached to the hospitals attended to the treatment of eye diseases. There were 3 schools for blind run by the State Government.

A survey for preparation of topographical map of trachoma sponsored by the Government of India was conducted in the State during 1959. The survey covered 90 villages in the State and 7,487 persons were included for investigation.

Madhya Pradesh : Eight eye camps in the districts of Rajgarh, Damoh, Mandla, Chhatarpur, Raigarh, Dewas, Betul and Jabalpur were organised. The number of patients examined and the number of operations performed in these camps were 12,292 and 1,418 respectively. Adequate medical and nursing services were provided in the camps. Patients admitted for operation were provided with boarding and lodging. Eye camps were also held at Jaithari, Sadul and Rajgarh by private organisations. Though it was intended to hold eye camps departmentally in future, yet the private organisations were also encouraged to do so, provided they satisfy the conditions laid down in the rules framed by the State Government.

Madras : The Trachoma Control Pilot Survey party surveyed six districts during the year 1959 for the preparation of topographical map on trachoma.

Two mobile ophthalmic units were functioning in this State, *viz.*, one at Tiruchirappalli organised by the Red Cross Society and the other at Vellore by the Christian Medical College and Hospital.

The Government Ophthalmic Hospital, Madras is an institution attached to Madras Medical College, for the teaching of ophthalmology to the undergraduates for the degree course and post-graduates for the Diploma in Ophthalmology (D.O.) and Master of Surgery (M.S.) degree of the University of Madras.

Mysore : In the whole of enlarged Mysore State there was one Ophthalmic Hospital at Bangalore and two Schools for the Blind, *viz.*, one at Mysore and the other in Whitefield. In Mint Ophthalmic Hospital, Bangalore, there was a sanctioned bed strength of 205. The total number of eye cases treated was 4,496 as in-patients and 48,272 as out-door patients. Out of 48,272 cases treated as out-patients, 2525 cases were treated for trachoma and 120 cases were operated for trachoma.

Besides, there was one Mobile Ophthalmic Unit at Mangalore and 17 wards attached to some of the important major institutions and District Hospitals in this State. The Mobile Ophthalmic Unit, Bangalore, conducted out-door eye examination on tour at different areas of the State. During 1959, this unit performed 493 eye operations and 4,339 patients were treated.

A special survey was instituted by the Government of Mysore during the year under report to gauge the incidence of trachoma in rural and urban areas of the State.

Orissa : There was no hospital exclusively for eye treatment. 48 beds were provided in the S.C.B. Medical College Hospital, Cuttack for treatment of eye diseases. Facilities were also available in the District Headquarters Hospitals and Sub-divisional Hospitals for treatment of common eye diseases.

As usual the Education Department sanctioned expenses in connection with delivery of lectures on "Prevention of Blindness" to students of certain High Schools and M.E. Schools by Medical Officers in-Charge of hospital and dispensaries.

Punjab : In Punjab there were 3 hospitals and 18 wards attached to General Hospital exclusively for the eye patients. The total number of beds available in these Government, Private and Municipal Institutions was 1,521 for eye cases. In order to cater to the needs of patients at places, where no specific eye hospitals exist and the people of far off area who cannot derive benefit of eye hospitals, the Punjab Health Directorate organised eye relief camps to relieve curable blindness and to eradicate diseases, which cause blindness and to take measures for prevention of blindness. In these camps technical help of eye specialists and some medicines were provided by the State Health Directorate for the treatment of poor and needy patients. The trachoma survey was carried out in Schools at Patiala and treatment was instituted under the care of the School Health Authorities.

Rajasthan : One Trachoma Pilot Project team continued to work in this State. It has its coordination of activities with Trachoma Pilot Project at Aligarh under the Indian Council of Medical Research, New Delhi. During 1959, eye relief camps were held at Shahpura, Bandikuai, Kherwara, Banswara, Ladna, Jaisalmer, Deeg, Bhilwara and Sadri where 1,910 eye operations were performed. These camps were held by the mobile Surgical Unit of the State. There was no separate eye hospital run by the Rajasthan Government. However, the scheme was submitted to the State Government for establishing eye institutes at Jaipur and Jodhpur. Special facilities under eye specialists or trained doctors were provided in 13 Government hospitals all over the State where 425 beds were available. Besides, routine eye treatment is given in all hospitals and dispensaries. The total number of eye cases treated was 8,73,557 as out-door patients and 9,127 as in-door patients as against 8,98,562 and 8,404 respectively during the previous year. Seven more hospitals for eye treatment were run by the private bodies where 300 beds were available.

There was a School-*cum*-Home run by the State Government for blind in Ajmer district where 50 students were accommodated and imparted education upto Matriculation standard.

The preventive measures taken are (a) compulsory primary vaccination against Smallpox, (b) examination of school boys with particular references to eye ailments and correction of refraction error and (c) improvement of general nutritional state by way of feeding children with milk and multivitamin.

Uttar Pradesh : Eye relief in the State continued to be offered by six institutions each operating in its respective zones with their bases at Aligarh, Sitapur, Lucknow, Agra, Varanasi and Kanpur.

The scheme for providing eye relief in the rural areas started in 1949-50 with a grant of Rs. 13,500 and with increased activities in this direction, the annual allotment had been raised to Rs. 75,000. Considerable work has been done so far by organising eye relief camps and establishing eye hospitals. For expanding the eye relief measures, the grant for the two premier institutions *i.e.* Gandhi Eye Hospital, Aligarh and Eye Hospital, Sitapur, was raised to the extent of Rs. 1,86,255 and Rs. 3,00,236 respectively. A grant of Rs. 1,10,000 was also given by the Central Government to the Eye Hospital, Sitapur to meet the financial implications in the Eye Relief Scheme. Under the Eye Relief Scheme glasses were supplied free of charge to poor patients after their cataract operations. 710 beds were available in these two hospitals, where 16,034 as in-door and 62,535 as out-door eye cases were treated and 19,468 eye operations were performed. 28 Government sponsored eye relief camps were also held.

The School of Optometry, established at Gandhi Eye Hospital, Aligarh in 1958 by the joint efforts of the Government of India and the State Government, continued to train students during the year under report.

West Bengal: Facilities for treatment of eye diseases were available in all big general hospitals of this State. There was also one private eye hospital with 50 beds in this State located at Calcutta.

Three mobile dispensaries of the Association for the Prevention of Blindness worked, as usual, mainly in the rural areas of the State. The activities of these dispensaries were confined to treatment of eye diseases. Issue of lectures, educating the mass in "Care of Eyes" and "Prevention of Blindness" continued during the year under report. Out of 2,37,564 persons examined by the Medical Officers of these dispensaries, 181 patients were found blinds.

There were 4 schools for the blinds functioning in the State during the year under report.

Andaman and Nicobar Islands: There was no hospital or clinic exclusively for treatment of eye diseases in this territory. The necessity of the same was also not felt to any great extent as the number of eye diseases was small. However, all cases of eye diseases, were attended to in different general hospitals properly and complicated cases were referred to specialists or specialised institutions mostly at Government expenses. The incidence of trachoma was low and on the whole the eye diseases was not a problem in the territory.

There was no school for blinds in this territory and if any blind person comes to the notice, he is recommended to be sent to school for the blind at mainland.

Delhi: In the Out-patient Ophthalmology Department of Lady Hardinge Medical College for Women, New Delhi-1, 3,509 cases in various eye ailments were treated. Out of these 754 cases were treated for trachoma.

Dr. Shroff's Eye Hospital, Delhi mostly catered to the needs of the poor eye patients. All efforts were concentrated on the efficient medical and surgical treatment of occular diseases and the consequent prevention and cure of blindness.

St. Permanand Blind Relief Mission, Delhi, besides holding of eye cure camps which form a major activity, was endeavouring to combat with the evils of blindness in the country by way of running four mobile dispensaries sponsored by the Central Social Welfare Board in the States of Rajasthan, Madhya Pradesh, Bihar and in the Union Territory of Delhi. The Institution received grants-in-aid from the Central Government, the Municipal Corporation of Delhi, the Bihar Government and the Central Social Welfare Board, New Delhi.

The All India Blind Relief Society, run the free model eye hospital at Lajpat Nagar, which is provided with 60 beds. On an average 100 patients attended the Out-door Department of the hospital daily. 1,002 eye operations were performed and the total number of patients treated was 29,836.

Himachal Pradesh : There was no special eye hospital in this Territory for the treatment of complicated eye cases nor was there any institutions for blind people. However, complicated cases *e.g.* Slit Camp Examination cases were referred to outside institutions. Each of the District Hospitals and Himachal Pradesh Hospital was having a separate eye clinic. All types of minor eye diseases were also treated in all the Civil Hospitals. No eye relief camps were arranged during 1959.

As regards the preventive steps, the public health staff and Medical Officers of rural dispensaries delivered health talks on the "Public Eye Diseases and Blindness".

Manipur : Four eye relief camps were opened of which 3 were in the hills and 1 in the plain to render eye treatment to the rural population of the territory.

Tripura : No separate eye hospital existed but there were two mobile eye dispensaries under the Territorial Council of this Administration. The two mobile dispensaries moved from one sub-divisional Headquarters to another so that they could cover all the sub-divisions in future.

Arrangements for training of blinds were not in existence during the year under review.

(xi) Tuberculosis

Tuberculosis is a major public health problem in India. The control of tuberculosis includes preventive as well as curative aspects.

The BCG programme was started in India in 1948 on a small scale with the help of International Tuberculosis Campaign and later with the help of the WHO and the UNICEF. 166 BCG Teams, each consisting of one team leader and 6 technicians, were working in the country. Upto the end of December, 1959, the number of persons tuberculin tested was 139,440,506 of whom 48,908,625 were vaccinated with BCG vaccine. It is expected that the target of 170 million tests will be achieved by the end of the Second Five Year Plan period.

The Central BCG Organisation continued to coordinate the campaign in the States and to assist them with the free supply of statistical and publicity material, films on BCG, film strips, pamphlets and literature on tuberculosis. To provide incentive to field workers in the States the Central

BCG Organisation instituted a shield to be awarded to the State adjudged best in all respects during 1959. Merit certificates for Medical Officers and field staff were also instituted. The total contribution from WHO/UNICEF for BCG campaign upto the end of the year 1959, would amount to over $2·4 million. For such campaign the UNICEF had been supplying vaccination, vehicles and public address equipment.

A sum of Rs. 2,08,400 was provided in 1959-60 budget for Central BCG Organisation while the estimated expenditure on the campaign in the State is likely to be in the neighbourhood of Rs. 50 lakhs. The Government of India offered a subsidy of Rs. 25 lakhs to States for the entire Second Five Year Plan period for meeting a part of the expenditure involved in raising the additional staff and training of BCG staff recommended by the Central BCG Organisation to achieve the target of 170 million of the vulnerable population in the country. Upto the end of 1959, only the Government of Madras and Andhra Pradesh availed of the offer to some extent.

National Tuberculosis Institute, Bangalore: The WHO/UNICEF and the Government of India signed a plan of operation in June, 1959 for the National Tuberculosis Training Programme. In accordance with the plan the Government of India established the National Tuberculosis Institute at Bangalore in 1959 for training of T.B. workers in the community and public health approach to control the disease. A field training programme will be organised in selected towns and Community Development Blocks in the contiguous States of Mysore, Madras, Andhra Pradesh where Doctors, Home Visitors, Laboratory Technicians and X-ray Technicians will be given training under actual working conditions.

Tuberculosis Demonstration and Training Centres: The T.B. Demonstration and Training Centres, established with assistance from WHO/UNICEF at New Delhi, Patna, Trivandrum, Nagpur and Hyderabad, continued to function satisfactorily during the year under report. X-ray laboratory equipments for the Hyderabad Centre and the Centre to be established at Patiala in the Punjab State were provided by the Government of India at a cost of Rs. 2 lakh each. During 1960-61, a Training Centre at Bangalore would function in association with the National Tuberculosis Institute and Centres at Calcutta, Ahmedabad and Agra are likely to be provided with X-ray and laboratory equipments.

Tuberculosis Hospital, Mehrauli (Delhi): The T.B. Hospital, Mehrauli had 306 beds during 1959, of which 54 beds were for treatment of children suffering from tuberculosis and 52 beds for the isolation of advanced T.B. patients. The hospital is administered by the Tuberculosis Association of India, New Delhi and major portion of the expenditure is borne by the Government of India.

The number of patients treated in the hospital was 1,006 of whom 373 were discharged. The number of operations done was 820. The hospital maintains an Out-patient Department for the benefit of persons residing in Mehrauli and neighbouring villages. The daily average attendance was 169. Out of 14,100 new patients, who attended this Department, 3,197 were found to be suffering from tuberculosis.

The Union Mission T.B. Sanatorium, Madnapalle :

The Government of India meet 50 per cent of the recurring expenditure on the maintenance of the 76 bedded Children's Hospital and Thoracic Surgery Centre at the Union Mission T.B. Sanatorium, Madnapalle, as the Centre is engaged in training in tuberculosis of doctors and technicians and in developing techniques for field studies on tuberculosis. Annually about 8 to 12 doctors, 9 laboratory technicians and 6 nurses are trained. A sum of Rs. 91,600 was provided in the budget estimates for 1959-60 as grant-in-aid to the Sanatorium.

Relief :

During the Second Five Year Plan period, a sum of Rs. 50 lakhs was provided for the establishment of about 4,000 tuberculosis isolation beds in various States. The Central Government is to meet 50 per cent of the cost of establishment of the beds subject to a maximum of Rs. 1,250 per bed. For 1959-60 the Government of India have approved the establishment of 1,505 beds bringing the total to 4,620. A sum of Rs. 14,47,443 was sanctioned to States for this purpose and the number of T.B. isolation beds established were 724.

T.B. Clinics, because of their diagnostic, advisory and preventive functions, serve as pivots around which Tuberculosis Control Scheme should revolve. Because of the shortage of beds, these clinics had to undertake domiciliary overall treatment. To serve this purpose effectively there should be a sufficient number of T.B. clinics of minimum standard. Accordingly it was planned to establish about 300 T.B. Clinics during the Second Five Year Plan period so that every district headquarters has at least one T.B. Clinic. The responsibility for up-grading the existing clinics and the establishment of new T.B. Clinics primarily rests with the State Governments but the Government of India provide X-ray and laboratory equipments costing about Rs. 50,000 to each such clinic. Accordingly 60 sets of X-ray and laboratory equipments were supplied during 1957-58 to various States out of which the equipments were installed at 50 clinics upto the end of 1959. The UNICEF provided the equipment to 20 T.B. Clinics during 1959-60 as the buildings for installation were ready and necessary staff was provided.

The Rehabilitation Work Centres for T.B. patients are intended to provide training to T.B. patients in the handicrafts such as tailoring, paper making, embroidery, soap making, basket making etc., which they can continue in their homes as a cottage industry. The scheme envisages payment of stipend upto Rs. 40 per month to each trainee during the period of training and a rehabilitation grant of Rs. 200 per trainee to enable him to start the trade after the training is over. The cost of each centre is estimated at Rs. 3 lakh non-recurring and Rs. 1 lakh recurring per annum.

A budget provision of Rs. 8·5 lakh was made for the year 1959-60 for reservation of beds and for rendering cash assistance to indigent displaced T.B. patients from West Pakistan. As against 518 beds reserved

during 1958-59, 523 beds were reserved during 1959-60 in various T.B. Hospitals/Sanatoria as shown in the following table:—

States	T.B. Hospitals/Sanatoria	No. of beds
1. Punjab	1. T. B. Hospital, Chetru	100
	2. Gulab Devi T. B. Hospital, Jullundur	50
	3. T. B. Hospital, Sangrur	50
	4. Lady Irwin Sanatorium, Jubar	40
	5. L. L. Sanatorium, Kasauli	10
	6. Christian General Hospital, Palwal	20
2. Uttar Pradesh	1. Bhumidhari Annexe Bhowali Sanatorium	23
3. Maharashtra	1. Central Hospital Ulhasnagar Township, Kalyan	50
	2. T. B. Hospital Aundh Camp, Poona	60
4. Gujarat	1. T. B. Hospital, Bantwa	25
5. Rajasthan	1. K. G. V. Sanatorium, Jaipur	15
	2. T. B. Hospital, Dungarpur	35
	3. Madar Union Sanatorium, Madar, Ajmer	45
	TOTAL	523

The activities of the State towards the control of tuberculosis are summarised below :—

Andhra Pradesh : 16,33,035 persons were tested and 5,72,569 persons were vaccinated by 13 BCG teams in this State.

Assam : The BCG Vaccination as a prophylactic measure against tuberculosis continued. The number of persons tested was 6,92,311 and the persons vaccinated were 2,48,441.

Seven T.B. Clinics with 6 observation beds in each clinic had functioned. Besides, one special T.B. hospital with 200 beds also functioned to provide in-door treatment facilities to the tuberculosis patients and urban T.B. wards with a number of T.B. beds, attached to the General Hospitals, also functioned. It was felt that upto the end of 1959, the number of T.B. beds was inadequate in comparison with the number of T.B. patients in the State.

No T.B. Clinics, Hospital or Sanatorium was opened. One existing T.B. Clinic was up-graded with the assistance of the Government of India.

Bihar : Three T.B. Clinics one each at Ranchi, Chaibasa and Dumka were opened during 1959. A 64 bedded T.B. Hospital was also opened at Koilwar in the Shahabad district. Additional 160 beds for male and female patients were provided in the institution at Itki.

18 BCG teams were functioning in the State and were engaged in second round of vaccination which was one of largest areas in the State. 3,717,943 persons were tuberculin tested and 1,560,542 persons were vaccinated.

Bombay: All the Civil Hospitals continued to provide facilities for free diagnosis and treatment of tuberculosis cases. There is also a T.B. Sanatorium at Mominabad in Bhir district and T.B. Chest Clinics at Nanded and Aurangabad. 23 BCG teams were working in Bombay State and 2,473,694 persons were tested and 8,48,214 persons were vaccinated.

Jammu and Kashmir: There were two T.B. Hospitals one each at Srinagar and Jammu with a bed strength of 190 and 85 respectively. The bed strength of T.B. Hospital at Srinagar was raised from 85 to 190 and that of Jammu from 50 to 85. During the first four years of the Second Five Year Plan period the BCG Organisation tested over 25 lakhs of people of whom more than 13 lakhs were vaccinated. 4,07,155 persons were tested and 1,84,011 persons were vaccinated by the three BCG teams.

Kerala: Three T.B. Hospitals continued to function during 1959. Three clinics were also opened during the year under report. Construction of other six clinics was in progress. Establishment of T.B. isolation wards, attached to the hospitals and clinics, were underway. Besides, there were six T.B. Seal Wards of 12 beds each attached to different institutions. The total bed strength of T.B. institutions was 818 during 1959. The number of T.B. patients treated in all the institutions in the State were 1,39,569 of whom 13,123 were in-patients.

On the preventive side BCG Vaccination Campaign was continued. 5,19,789 tuberculin tests were performed and 1,94,108 of the tested were BCG vaccinated. One team each was posted for BCG vaccination work at Laccadive, Minicoy, Kavarathy and Amindive Islands.

Madras: The Government sanctioned the up-grading of Tuberculosis Clinics in the Government Hospital, Kancheepuram, The Government Headquarters Hospitals, Salem and Tiruchirappalli and the up-graded clinics started fuctioning from 1959. A new Tuberculosis Sanatorium was constructed during the year under review at Austinpatti near Madurai. The State Government also sanctioned the construction of additional wards for providing 60 isolation beds in this Sanatorium.

An After Care and Rehabilitation Centre existed in the Tuberculosis Sanatorium, Tambaram to take care of 45 cured cases kept under medical supervision. One BCG Unit, which started functioning in Ramanathapuram during the last week of December 1958, continued its work upto the 1st week of July, 1959. The Unit then commenced working in Madurai district of the State. Work has so far been completed in the taluks of Pariakulam, Palno and Kodaikanal and is in progress in the other taluks of the district. Another BCG Unit completed its work in the South Arcot district. The campaign was inaugurated in Sirkali taluk in Tanjore district in April, 1959. The response from the public in this scheme in South Arcot district was generally fair. There was some anti-propaganda against the campaign by certain section of the people in Tanjore district. This was met by active and intensive educational campaign by the BCG staff. 7,58,339 persons were tuberculin tested and 2,11,960 persons were vaccinated during the year under report.

Madhya Pradesh : A 100 bedded T.B. Hospital started functioning at Raipur during the year under report. The Tuberculosis Clinic at Raipur was also up-graded according to the pattern of the Government of India by providing additional staff and equipment. The construction of Tuberculosis Hospital building, which was taken up under the Tribal Welfare Department Scheme at Ghargone, was in progress. Two new wards of 40 beds each were added to the Tuberculosis Hospital, Bhopal.

The BCG work was re-organised into two zones, *viz.*, Eastern Zone and Western Zone with headquarters at Indore and Jabalpur under the charge of one BCG Supervising Officer. 10,66,027 persons were tested and 3,85,032 persons were vaccinated in 1959.

Mysore : The BCG vaccination programme under the administrative control of the Director of Public Health, Mysore, covered Coorg, Mandya, Hassan, Mysore, Dharwar, Bidar Gulburga, Bangalore and Bellary districts. Ten teams had worked during the year under report and 6,30,283 persons were tested and 2,32,073 persons vaccinated. A sum of Rs. 1,67,046 was spent on the BCG Vaccination Programme during 1959-60.

The T.B. institutions, providing relief to the T.B. patients in Mysore State, consisted of 6 Sanatoria having 1,199 beds and T.B. Hospital, Devanagar with 32 beds and T.B. Wards in different district hospitals having 184 beds, rendered in-door treatment. There were 9 T.B. Clinics providing outdoor and domiciliary treatment. Two more clinics one each at Mandya and Mercara were up-graded during the year 1959.

The Government sanctioned the establishment of T.B. After Care and Rehabilitation Centre at Bangalore by taking over the existing victory colony under this scheme sponsored by the Central Government. 50 convalscent T.B. patients will be trained in higher vocations like printing, embroidery, tailoring, handloom, weaving, etc., and at the end of training a rehabilitation grant of Rs. 200 will be given to each for the continuance of the occupation independently.

A Tuberculosis Demonstration and Training Centre was sanctioned for its establishment at the Lady Willingdon T.B. Clinic, Bangalore.

Orissa : Nine BCG teams continued to operate in the State during the year under report. 9,18,045 persons were tested and 3,39,822 persons were vaccinated. All BCG teams received WHO/UNICEF aid in the shape of vehicles, vaccine and equipments. One station-wagon was supplied by UNICEF to this mass BCG campaign. There was a provision of increasing 30 more beds at Chandpur T.B. Hospital. One Anti-Tuberculosis Demonstration and training Centre was to be set up at the S.C.B. Medical College, Cuttack after completion of the building. Altogether 237 beds, *viz.*, 215 in different institutions and 22 in the Sanatoria were available for the treatment of tuberculosis patients in the State.

Punjab : Nine T.B. Hospitals/Sanatoria with a total bed strength of 1,431 continued to function in the State during the year under report. Out of these 3 were fully maintained by the State Government, one jointly with Central Government, one by Gulab Devi Trust, one by Christian Medical

College, Ludhiana, one by the Rehabilitation Department and two by the Tuberculosis Association of India, New Delhi. There were 18 T.B. Clinics and one T. B. Centre in the State. These Clinics during the year under report had 178 beds. Out of these clinics 6 were carrying out domiciliary treatment.

Towards the grant-in-aid to the authorities maintaining non-government T.B. clinics in the State, the Government of Punjab sanctioned Rs. 1,45,000. The second round of BCG vaccination started and 15,76,073 persons were tested and 5,02,237 persons were vaccinated.

Six doctors were admitted to Diploma T.B. Course during 1959 at the Medical College, Amritsar.

Rajasthan: There were 5 T.B. Hospitals/Sanatoria, 9 Clinics, 4 T.B. wards in General Hospitals and 7 isolation wards in General Hospitals functioning during 1959. The number of beds available in these institutions was 626. Besides, there were 173 beds available in Madar Sanatorium at Ajmer run by the Voluntary Mission Organisation. One T.B. Clinic was opened at Banswara and T.B. Hospital at Bari (Udaipur) had been upgraded as provincial T.B. Sanatorium, the construction of which was in progress. The total number of BCG vaccinations performed during the year under report was 1,57,243 and 5,72,396 persons were tuberculin tested.

Uttar Pradesh: There were 10 T.B. Sanatoria/Hospitals, 23 T.B. Clinics and 15 T.B. wards attached to certain district hospitals in the State with 1,203 T.B. beds. A 20 bedded ward was completed at Bhowali Sanatorium and 50 beds for isolation of T.B. cases were established at Infectious Diseases Hospital, Hardwar. A 20 bedded ex-servicemen ward also started functioning at Gethia T.B. Sanatorium and an addition of 20 beds at Kasturba T.B. Clinic and Hospital, Lucknow had been sanctioned by the State Government during the year under report. Thus the total number of T.B. beds was raised from 1,203 to 1,313.

20,86,191 persons were tuberculin tested and 5,42,428 persons were vaccinated.

West Bengal: Ten new chest clinics were opened and the total number of chest clinics were risen to 52 in the State during the year under report. Nine Mobile Domiciliary Units also functioned of which four were in Calcutta and five in mofussil districts. Of these, eight units were maintained by the State Government and the remaining ones by a voluntary organisation. A new T.B. Hospital with 250 beds under the management of the State Government was opened at Dhubulia. The number of T.B. Hospitals and their beds were 15 and 2,897 respectively. Besides, the T.B. beds were also maintained in different chest clinics and General Hospitals of the State. The total number of T.B. beds at the end of the year 1959 was 3,397 as against 3,113 in the previous year.

Indigent T.B. patients undergoing treatment at Government Institutions in both the in-door (free beds) and out-door departments were supplied with anti-tuberculosis drugs free of cost. The bed-ridden patients under the treatment of local registered medical practitioners as well as those attending non-Government institutions were not precluded from such facilities. 14,17,667 persons were tuberculin tested of whom 4,70,035 persons were vaccinated.

Andaman and Nicobar Islands : There was no special hospital or clinic for T.B. cases. A 18 bedded ward, attached to the Bambooflat Hospital, Port Blair, functioned. Although the ward was 18 bedded, extra accommodation upto 50 beds was made available for T.B. patients during 1959. T.B. cases of the Islands, whether they are indigenous population or imported from mainland, were admitted here till they are cured or otherwise discharged. The supply of drugs during and after admission were supplied free of cost.

The BCG campaign started functioning in this territory from March, 1959 and 9,943 persons were tuberculin tested of whom 5,114 persons found negative and were vaccinated.

Delhi : The BCG vaccinations in New Delhi were carried out by the BCG team under the control of the Municipal Corporation of Delhi. The team tuberculin tested 98,349 persons of whom 31,193 were BCG vaccinated.

Himachal Pradesh : There were four T. B. Wards and Sanatoria having in-door accommodation. Besides, there was a T.B. clinic attached to each District Hospital and Himachal Pradesh Hospital, where patients were given out-door treatment. For isolation of T.B. patients in Bilaspur district some beds were reserved at the T.B. Ward, Mandi. Necessary arrangements were made to provide full accommodation for laboratories and radiological sections for the examination of T.B. patients.

The BCG vaccination campaign was started in this Territory in the beginning of the First Five Year Plan. 1,10,045 persons were tuberculin tested and 34,186 were found positive and 54,236 persons were vaccinated in this territory.

Manipur : A 100 bedded Tuberculosis Hospital was established in the territory. The BCG vaccination was continued and during the year under review 58,515 persons were tuberculin tested of whom 27,912 showed positive results and 21,282 were vaccinated.

Pondicherry : The domiciliary services for T.B. were in progress and the total number of children and adults received this service during 1959 were 1,771. There were 207 patients in T.B. Ward. The BCG team tested 43,514 persons of whom 20,466 persons were BCG vaccinated.

CHAPTER III

PROGRESSIVE HEALTH ACTIVITIES

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PROGRESSIVE HEALTH ACTIVITIES

(i) Health Events

The salient features in regard to health events in the various States are detailed below:—

Andhra Pradesh: The Government of India Aided Scheme for training of Indigenous Dais was implemented during the year under report and 800 dais, in addition to 50 to 100 dais trained every year in Telengana region, were admitted.

A Central Nutritional Laboratory was established under the control of the State Government and was on the way to equip with necessary clinical equipments. Under the Plan Scheme of Rural Sanitation Unit, a sum of Rs. 22,000 was granted during the year 1959-60.

Proposals to extend the Madras Registration Act, 1899 to Telengana area, with some amendments, were sent to the State Government. Proposals for the extension of the Madras Public Health Act, 1939 to Telengana area and issue of unified vaccination rules for entire State were also under consideration of the State Government.

Besides, 13 Family Planning Clinics were opened during 1959-60. A State Nutrition Committee with Secretary to the Government of Andhra Pradesh, Health, Housing and Municipal Administration Department as Chairman was constituted in September, 1959 and its meeting was held on 15-12-1959.

Assam: The Medical and Public Health, *i.e.*, the preventive and curative sides were amalgamated to some extent. The Assam Preventive of Food Adulteration Rules, 1959 were enforced.

Bombay: The District Health Scheme was introduced in Buldana, Akola, Nanded and Parbhani districts. Proposals for the formation of Advisory Committee for Public Health Centres were under consideration of the State Government.

Madhya Pradesh: The proposals for extension of The C.P. Medical Registration Act, 1916 (Act No. I of 1916), the M. B. Nurses, Midwives and Health Visitors Registration Act, 1955 (Act No. II of 1955), the C. P. and Berar Ayurvedic and Unani Practitioners Act, 1948 (Act No. IV of 1948), the M.B. Nursing Homes Registration Act, 1954 (Act No. 24 of 1954) and the C.P. and Berar Village Sanitation and Public Management Act (Act No. II of 1920) to whole of Madhya Pradesh were under consideration of the State Government.

Madras: The proposal to develop the Health Education Branch was under consideration. On the recommendations of the Public Health Board, the Government Analyst and Chief Water Analyst Department were transferred to Public Health Department from the Medical Department of the State.

Proposal to eradicate smallpox was finalised and a pilot eradication programme in Chingleput district was started.

Rajasthan : The work of establishment of Public Health Laboratories sanctioned under the Second Five Year Plan period was continued during the year under report. The prevention of Adulteration of Food Act, 1954 was enforced in this State.

Uttar Pradesh : The School Health Re-organisation Committee constituted by the State Government some years back completed its job and submitted a detailed report to the State Government with regard to the expansion of school health works. The report was under consideration of the State Government.

Tripura : Bye-laws under the Births, Deaths and Marriages Act, 1886 were under consideration to enforce in this territory.

(ii) Sanitation, Water Supply and Conservancy

The National Water Supply and Sanitation Programme was started in the latter part of the First Five Year Plan period. For this a Central Public Health Engineering Organisation was set up in 1954-55 in the Directorate General of Health Services, New Delhi. Under this programme, assistance was rendered by the Central Government in the form of loans for approved urban schemes and grant-in-aid for rural schemes. The number of urban and rural water supply and sanitation schemes, sanctioned during 1959, for different States in India are presented in Table No. 15.

Urban Schemes :

During the year under review 61 water supply and sewerage schemes were approved with an estimated cost of Rs. 681·245 lakhs. So far 278 water supply schemes and 61 drainage schemes with an estimated cost of Rs. 6416·245 lakhs were approved under the National Water Supply and Sanitation Programme.

For the implementation of these schemes, approved so far, a sum of Rs. 2911·155 lakhs was sanctioned as loan upto March, 1959. A further sum of Rs. 950 lakhs was provided during the financial year 1959-60.

Corporation Schemes :

The following water supply and sewerage schemes of Municipal Corporations were also approved during the year under review :—

States	Schemes	Estimated Cost (Rs. in lakhs)
(1) Andhra Pradesh .	Hyderabad Water Supply and Sewerage Schemes (7 estimated).	34·038
(2) Bombay . .	Poona Water Supply Scheme	96·415
3) Mysore . .	Bangalore Water Supply and Sewerage Schemes	91·860
	TOTAL .	222·313

15 water supply and sewerage schemes of Municipal Corporation with an estimated cost of Rs. 840·140 lakhs have so far been approved under

this programme. Upto March, 1959, loans totalling to Rs. 153·500 lakhs were sanctioned for executing these schemes and during the financial year 1959-60, a further sum of Rs. 250 lakhs was provided.

Rural Schemes :

29 rural water supply and sanitation schemes with an estimated cost of Rs. 183·031 lakhs were approved during the year under report, the details of which are presented in Table No. 15.

234 water supply and sanitation schemes with an estimated cost of Rs. 1774·006 lakhs were under execution in different States under the rural phase of the National Water Supply and Sanitation Programme. Upto the end of March, 1959, a sum of Rs. 774·0935 lakhs were paid by the Government of India as outright grant-in-aid to different States for the execution of these rural water supply and sanitation schemes approved under the programme. A further sum of Rs. 205·70 lakhs was also provided for this purpose during the year 1959-60.

The number of towns having adequate, inadequate and no protected water supply together with the corresponding population in different States in India during the year 1959 is given in Table No. 16.

From the table it will be seen that among the States only in Punjab and West Bengal, more than 50 per cent of urban population had adequate protected water supply. The States of Andhra Pradesh and Rajasthan fall in the range of 40 to 50 per cent; Bihar in 30 to 40 per cent; Kerala, Madhya Pradesh and Uttar Pradesh in the range of 20 to 30 per cent. In other States barring Bombay, Jammu and Kashmir, for which information is not available, less than 20 per cent of the urban population had adequate protected water supply. Among the Union Territories, Manipur and Tripura had cent per cent and in the cases of other territories only a fraction of urban population had either inadequate or no protected water supply.

Training in Public Health Engineering :

This programme envisages the training of Engineers, Engineering Subordinates, Water Works Operators and Sanitary Inspectors in different courses of varying duration especially designed to meet the requirements of the National Water Supply and Sanitation Programme. A provision of Rs. 30 lakhs was made in the Second Five Year Plan period for this purpose. During the year under review, the training of the following categories of personnel, sponsored by their respective State Governments, was undertaken :—

Type of Courses	Number trained	Institution where courses were conducted
(a) Engineers in Post-graduate Courses.	39	(1) All India Institute of Hygiene and Public Health, Calcutta. (2) Engineering College, Guindy, Madras.
(b) Engineers in Short-term Courses	22	(1) Engineering College, Guindy, Madras. (2) Engineering College, Roorkee.

Type of Courses	Number trained	Institution where courses were conducted
(c) Engineering Subordinates in Short-term Courses.	60	(1) Engineering College, Guindy, Madras. (2) All India Institute of Hygiene and Public Health, Calcutta. (3) Engineering College, Roorkee.
(d) Water Works Operators	34	(1) Water Works, Lucknow.
(e) Sanitary Inspectors (December, 1958 to February, 1959).	27	(1) Orientation Training Centre, Najafgarh (Delhi).

Stipends at the rate of Rs. 150 per month to Engineers, Rs. 100 per month to the Engineering Subordinates and Water Works Operators and Rs. 75 per month to Sanitary Inspectors were given to the candidates during the period of their training by the Government of India in the Ministry of Health, New Delhi. In addition to the stipends, tuition and examination fees, cost of the educational tours etc., were also borne by the Central Government on behalf of the trainees.

Operational Agreement No. 25 :

No material was obtained during the year from the T.C.M., U.S.A. An amount of $ 15,000 was, however, provided under Supplement V to O.A. 25 for procurement of certain laboratory equipments and contracts for the supply of the equipment are being concluded by the I.S.M., Washington.

Materials and equipment worth $ 5·957 million have already been procured from the U.S.A. and distributed to the State Governments during the previous years to help in the implementation of the National Water Supply and Sanitation Programme. The materials and equipment procured include well drilling rigs, C.I. Pipes, Wind Mills, Air Compressors, Jeeps, Jeep Station Wagons, Trucks, Laboratory equipments, Public Health Engineering Kits and Public Health Engineering Books.

(iii) Health Units

A number of health units have been functioning in rural areas all over the country. They are primarily intended to disseminate information on public health matters to the lay man and to act as a demonstration centre. Field training to various medical and para-medical personnel is also imparted at these units. Also, they provide necessary medical facilities in the areas under their respective jurisdiction. Information in respect of these Demonstration Health Units for 1959 is available for 7 such units, *viz.* :—

1. Re-orientation Training Centre and Health Unit, Najafgarh (Delhi);
2. Rural Health Centre and Health Unit, Poonamallee;
3. Health Training Centre, Ramanagram;
4. Rural Health Unit and Training Centre, Singur;
5. Health Training Centre, Naila;
6. Field Demonstration Centre, Rajgir and
7. Health Unit, Saoner.

The vital and health statistics of different units is shown in Table Nos. 17 to 24. The vital statistics recorded in the unit area together with years of establishment of each unit are given in Table No. 17. The birth rates recorded in the unit areas were higher than those registered in the rural areas of the State as a whole in all the units. The recording of higher birth rates in unit areas compared with rural areas of the State as a whole is an index of the better registration for the unit areas.

The medical and public health personnel employed in various units during 1959 are given in Table No. 18. The maternity services were rendered by the M.C.H. Centres and Homes functioning in the unit areas. The home-visits were paid by the staff employed and the statistical information to this effect is presented in Table No. 19. The medical examination of the school children in the unit areas was also undertaken by the unit staff. The percentages of medically defective school children due to different causes of sickness in different units are given in Table No. 20.

Table No. 21 shows deaths and death rates per mille of population due to certain causes of sickness recorded in different units during 1959. It will be observed that death rates due to T.B., diarrhoea and dysentery and other fevers were higher in the unit areas from where the information is available. The Health Unit, Najafgarh (Delhi) also reported the higher death rate due to enteric fever. Deaths due to smallpox were reported only from Health Units at Poonamallee and Singur. No death due to cholera and plague was reported from any of the units during the year under report. Necessary preventive measures such as anti-cholera inoculations, smallpox vaccinations, anti-plague inoculations, BCG vaccinations, anti-typhoid inoculations and other preventive measures against malaria were undertaken in all the unit areas. The statistics of the work done is shown in Table No. 22.

The training programme of health personnel continued in all the units and the number of personnel trained is shown in Table No. 23. In all 253 sanitary inspectors, 34 dais, 86 health visitors and 20 persons in first-aid were trained. The number of health exhibitions, lectures delivered on epidemic diseases etc., in various health unit areas is shown in Table No. 24. Besides, training was also imparted in some of the units in other health fields which are detailed below:—

Rural Health Centre and Health Unit, Poonamallee: Pupil Health Visitors from School for Health Visitors, Pupil Maternity Assistants from the various cities, State Hospitals, District Boards and Municipalities, Sanitary Inspectors from Medical College, Madras, Auxiliary Nurse Midwives from Kasturba Gandhi Hospital, Madras were deputed to this Health Unit and underwent training at the Unit during the year under report. The Madras Stanley and Vellore Medical College students and 3rd year students from Mysore Medical College visited the Health Unit to study the field work carried out in the Unit area.

Health Training Centre, Ramanagram: The joint nursing project sponsored by the WHO and UNICEF for training of auxiliary nurse midwives at Health Training Centre, Ramanagram continued and the second batch of auxiliary nurse midwives completed the course of training during 1959.

The Orientation Training Course to health personnel working in Community Development and National Extension Service Blocks of the State was started at this Health Training Centre from 14th December, 1959. The first batch deputed for training was of 12 doctors.

Rural Health Unit and Training Centre, Singur : Eighty-three people in D.P.H., L.P.H. and D.M.C.W., 30 in M.E. (P.H.) 12 in D.N. Dip. Diet, Certification in Nutrition, 39 in C.P.H.N., 24 in C.P.H.E., 94 in Orientation of P.H. of C.D.P. Personnel, 11 Primary School Teachers (Teacher Training School of Health), 54 Health Inspectors of Cuttack Medical College, Orissa State were also trained at this Unit during the year under review.

(iv) Primary Health Centres

An important aspect of health activity directed towards improving the health conditions in rural areas and stressing the pre-eminence of the preventive approach is related to the programme of the Primary Health Centres. These Centres have been conceived as the focal points in the rural areas for providing preventive and curative health services in an integrated form to the rural population. A sum of Rs. 50 lakhs was provided in the revised First Five Year Plan period of the Ministry of Health for the grant of subsidies to States for establishing Primary Health Centres. Only 74 Primary Health Centres were established during the First Five Year Plan period.

In the Second Five Year Plan period a sum of Rs. 19 crores was provided for the establishment of 2,000 Primary Health Centres in National Extension Service Blocks of the various States. These centres were to be in addition to about 1,000 which were to be opened during the Second Five Year Plan period in the Community Development Blocks by the Government of India in the Ministry of Community Development and Cooperation. Each health centre is to have its headquarters in the Block area with an attached dispensary and a minimum of 6 beds to attend to maternity and other emergency cases and 3 sub-centres suitably located within the Block area to cater to an average population of 66,000. A team of health workers will cover the surrounding area in the Block looking after the needs of the area in both curative and preventive aspects. The main services to be provided by the health teams of these centres are as follows :—

(1) Medical Care;

(2) Maternal and Child Health Services including School Health;

(3) Health Education;

(4) Control of Communicable Diseases;

(5) Environmental Sanitation with priority for provision of safe water supply and hygienic disposal of waste;

(6) Improvement in the collection of vital statistics and

(7) Family Planning.

In accordance with the information received from the various States, the number of Centres so far opened (including those opened during the

First Five Year Plan period) upto 31st March, 1959 and the number proposed to be opened during 1959-60 and 1960-61 are as follows:—

States	No. of Primary Health Centres opened during the first Five Year Plan period and during the first three years of the Second Five Year Plan period *i.e.* upto 31-3-1959	No. of Primary Health Centres proposed to be opened during the fiscal years	
		1959-60	1960-61
1. Andhra Pradesh	110	80	10
2. Assam	37	28	14
3. Bihar	166	34	46
4. Bombay	133	122	105
5. Jammu and Kashmir	13	10	17
6. Kerala	73	5	8
7. Madhya Pradesh	112	98	34
8. Madras	118	20	20
9. Mysore	87	40	40
10. Orissa	61	65	30
11. Punjab	66	8	3
12. Uttar Pradesh	280	123	218
13. Rajasthan	47	16	26
14. West Bengal*	96	32	41
TOTAL	1,399	681	612

NOTE —*Excluding 309 thanas.

With effect from the 1st April, 1958 the pattern of central assistance for the establishment of Primary Health Centres was revised by pooling the resources of the Ministry of Health and the Ministry of Community Development and Cooperation. Under the revised arrangement, each Primary Health Centre is getting Central subsidy towards non-recurring expenditure upto a ceiling of Rs. 67,500; made up to Rs. 60,000 or 75 per cent of the actual expenditure whichever is less on buildings (both for the Centre and residential quarters for the staff including suitable accommodation for a Family Planning Clinic) and upto Rs. 7,500 for equipment, furniture, bedding and clothing. Towards recurring expenditure, the Ministry of Community Development and Cooperation are paying Rs. 2,000 per annum for each Centre towards drugs and upto Rs. 6,500 per annum towards expenditure on staff, the balance being payable by the State Governments concerned. The increased subsidy towards buildings for the Primary Health Centres is also admissible to the States retrospectively from the 1st April, 1956 for those centres which were opened in National Extension Service Blocks during the first two years of the Second Five Year Plan period.

A provision of Rs. 150 lakhs was made in the budget of the Ministry of Health for grant of subsidy to the State Governments during 1959-60.

(v) Medical Inspection of School Children

No uniform system of Medical Inspection of School Children existed in the various States of India. Each State had its own system and in some States the system even differed from one region to another.

The statistical information regarding the existence of the School Medical Inspection System and the number of students examined and found defective due to certain causes of sickness in different States is given in Table No. 25. During 1959 the System of Medical Inspection of School Children existed in the States of Andhra Pradesh, Assam Madhya Pradesh, Punjab, Rajashan, Uttar Pradesh and in the Union Territories of Himachal Pradesh, Manipur and Tripura. There was no arrangement in the State of Kerala and the Union Territory of Pondicherry. The school children were generally found to be suffering from bad teeth, tonsils, eye defects and skin diseases etc.

The activities carried out in different States during the year under report are as detailed below:—

Andhra Pradesh: The school medical inspection, started in 1934 in the former State of Hyderabad, continued during the year under report. Regular feeding programme of school children was taken up in selected schools where skimmed milk powder was supplied.

Assam: The School Health Services Scheme was introduced in Gaunati in 1957 and the unit was shifted to Jorhat in October, 1958. The operation of this Scheme was mainly concentrated in Sibsagar and an amount of Rs. 1,22,733 was sanctioned. Under the Scheme minor ailments were treated by the Medical Officer and was followed up by regular checking. Out of 4,605 students examined 1,798 were found to be defective. Out of defective students 44·88 per cent and 30·14 per cent were found to be suffering from bad teeth and tonsils. 4·06 per cent of total defective were not protected against smallpox. Arrangement for supplementary feeding for school children was made by the Education Department in collaboration with the Health Department of the State.

Kerala: There was no arrangement in this State for school medical inspection.

Madhya Pradesh: There was no regular service for the medical inspection of school going children in the entire State. During the year under review only 10·64 per cent of the total school going children were examined and 26·45; 19·15; 18·62 and 14·42 per cent were found to be defective due to malnutrition; skin diseases; bad teeth and eye defects respectively. Different arrangements existed in different areas of former B and C States now amalgamated with the State after reorganisation of the States in 1956. These are detailed below:—

Mahakoshal Region: The Assistant Medical Officer visited all the Government Secondary Schools of boys every month, examined them and advised them for medical treatment. Detailed medical examination was

done annually in Government Institutions. Other institutions also provided facilities for medical examination. The Government touring doctors also visited schools in rural areas periodically. These were, however, some schools where there was no such povision for medical examination but their numbers were very few. Steps were taken to provide such facilities also thereat.

All the secondary schools for girls situated in urban areas were regularly visited by the Lady Medical Officer or Lady Assistant Surgeon of the respective districts once or twice in a year for detailed medical examination and treatment prescribed where necessary. Monthly visits were also paid in some schools to look after the sanitation and general health of the students.

Madhya Bharat Region : There was no regular school health services but there was provision for medical care of students in some areas. The Senior Medical Inspector at Gwalior was responsible for the medical inspection work in Gwalior region. One full-time Medical Inspector with necessary staff was looking after the health of the boys studying in Primary and Middle Schools at Indore. In Ujjain region there were regular school medical services for the Government Primary and Secondary Schools and Colleges.

Vindhya Pradesh Region : No regular and definite arrangement existed in this region. Students had to go to hospitals and dispensaries, wherever, available.

Bhopal Region : One Medical Officer with his staff was appointed at Bhopal for the organisation of the scheme and control over the work of part-time Medical Officer at tehsil level. One Lady Doctor at Bhopal, one at Sehore and thirteen part-time Medical Officers at tehsil level were appointed. They were guided by the Medical Officer at Bhopal and looked after the health education, sanitation, health supervision, correction of physical defects, control of malaria and communicable diseases among students and supply of first aid boxes to schools and hostels.

In 1959 out of 28,954 educational institutions the medical examination was conducted in 3,354 institutions. The defects detected were brought to the notice of the guardian. Height and weight charts were kept in all schools and the cases of under-developed students were also reported to their guardians. Sufficient arrangements for the supplementary feeding for the school going children were not available. Majority of students brought their tiffens and in some of the schools the students were supplied with milk.

Punjab : There were two different systems of medical inspection of school children in urban and rural areas in the State which are detailed below :—

Urban areas : Schools continued to make their own arrangements for medical inspection of school children by employing part-time School Medical Officers. *viz.*, Assistant Surgeons-in-Charge of local hospitals and dispensaries or private medical practitioners. Such schemes were financed by realising money from the students themselves.

Under the School Health Service Scheme of the erstwhile Punjab State, School Health Clinics at Ludhiana, Rohtak, Hissar Karnal and Amritsar continued and 11,289 students were examined during the year under report.

In the erstwhile area of Pepsu State the Medical Inspection of School Children Scheme continued during the year under report and 14,109 students were examined.

Rural Areas: The Medical Officer-in-Charge of rural dispensaries continued to do the work of medical inspection of school children of Government Primary and Middle Schools free of charge. The Medical Officers, however, received emuneration for this additional work from the School Health Fund. The work done by the Medical Officer-in-Charge of the Provincial Rural Dispensaries in this behalf is summarised below:—

(i) Number of schools visited	243
(ii) Number of students examined . . .	40,820
(iii) Number of students found defective . .	8,334
(iv) Number of students treated	7,947

Rajasthan: So far the medical inspection of school children was carried out regularly only in Jodhpur and Jaipur. The same was in existence in Jodhpur City even until now but at other places it had to be suspended for certain administrative reasons. A scheme was prepared in 1956 to carry out the regular medical inspection of school children in schools, which was under consideration of the State Government. During the year under review the medical inspection was carried out in 14,391 institutions.

Uttar Pradesh: The school health services were rendered in 14 big towns of this State at present by the whole time School Health Officers and in the rest of the districts and towns of the State the District Medical Officers of Health and Municipal Medical Officers of Health carried out the work besides their own duties in the capacity of *ex-officio* School Health Officers.

To cater to the medical needs of the school going children there was a central school dispensary in each of the 14 towns under the supervision of the whole time School Health Officer. These dispensaries were provided for the treatment of minor ailments and defects detected during detailed examination. One Honorary Dentist and Ophthalmologist were also attached to each dispensary, who visited the dispensary twice a week and examined the scholars requiring treatment for their dental and eye diseases.

Follow-up of the defective students was done and students of major ailments, who could not be treated at dispensaries, were advised to go to the District Hospital for treatment.

17,590 ill-nourished boys were supplied UNICEF milk in schools on the recommendations of the School Health Officer and after due classification by the institutions as indigent.

Himachal Pradesh: The systematic medical examination of school children was done by the Medical Officers in their respective zones. The students found defective were issued advice slip and asked to visit the nearest hospital/dispensary. On the subsequnt visit of the Medical Officer the defective children were required to show the slip and the treatment which they had undertaken. The UNICEF milk was distributed among the school children.

Manipur : The Medical Officers one male and one female, examined the school children twice a year. During 1959 medical examination was conducted in 48 schools and 12,102 students were examined. Mal-nutrition, bad teeth and gums, skin diseases and respiratory diseases were found to be prevailing among students. UNICEF milk powder was distributed among students.

Pondicherry : There was no systematic medical examination of children existing in this territory. Mid-day meals were, however, given to 18,000 school children. The expenses were debited towards the State budget.

Tripura : There were 3 School Health Officers for 3 zones *viz.*, Northern, Southern and Central. The medical inspection was carried out in schools and the number of students found defective from different diseases during the year under review were as follows :—

Cause of Sickness	No. of defective students	Percentage of defective students to total
1. Mal-nutrition	460	23·23
2. Bad teeth and gums	674	34·04
3. Tonsils	193	9·75
4. Eye defects	76	3·84
5. Skin diseases	160	8·08
6. Respiratory diseases	1	0·05
7. Enlarge spleen	1	0·05
8. Not protected against smallpox	2	0·10
9. Other causes	413	20·86
TOTAL	1,980	99·96

(vi) Industrial Health

With the advent of independence, certain assurances were given to labour in recognition of its rights which had long been neglected. Much progress has been made in the implementation of the social security measures provided under the Employees' State Insurance Act, 1948. Care, comforts and security when given to industrial workers lead to increased production and harmony in industrial undertakings. Thus the scheme is not only playing a vital role for the welfare of the industrial workers but also building a pattern of well being for the entire country.

The various activities undertaken by the various State Governments in the country during the year under report are summarised below :—

Andhra Pradesh : Under the Factories Act, 1948, the District Health Officer, Municipal Health Officers and the Regional Assistant Director of Public Health were appointed as Additional Inspectors of Factories. They

had inspected about 596 factories in their respective jurisdictions in regard to the upkeep of environmental sanitation and forwarded their reports to the Factory Inspectors for rectifying the defects. 92 seasonal factories and 428 non-seasonal factories were inspected by the Health Officers. Adequate action was taken regarding the provision of drinking water and sanitary conveniences to the workers. The general health conditions of the factory labourers were satisfactory.

The District Health Officers, Srikakulam, Nellore, Chittoor, Kurnool, Cuddapah and Anantapur had inspected the mines under their jurisdictions and made appropriate recommendations to improve the health conditions of the persons working in the mines.

Under Section 89 and 90 of the Public Health Act, every urban and local authority shall within one year from the enactment of the Act or within such time as it is decided by the State Government demarcate and notify residential and industrial areas in consultation with the Health Officer concerned and the Collector and after obtaining the approval of the Director of Public Health and Director Town Planning, Andhra Pradesh, Hyderabad. Many of the local authorities requested for extension of time with the result that industrial concerns were springing up indiscriminately to the detriment of the residential population.

The Employees' State Insurance Scheme was started in the year 1955. A budget of Rs. 50·84 lakhs was earmarked for the entire period of the Second Five Year Plan for the State of Andhra Pradesh. The Employees' State Insurance Scheme was applicable to such of those factories which were perennial and employed more than 20 men with the aid of powers. Seasonal factories such as Sugar Factories, Rice Mills, etc., were covered under the Scheme during the year under report.

Bombay : Some of the industries have occupational health service clinics of their own *viz.*, Tata Industries Medical Service Clinics, Standard Vacuum Oil Company Medical Clinics etc. Some of the clinics were licenced for treatment of insured persons belonging to industries.

The Medical Factory Inspectors were also appointed by the Government in Greater Bombay and other industrial cities to look after the general health of the workers in accordance with the Factory Act and Rules.

The Employees' State Insurance Scheme covered a considerable part of the population of the areas in which it was implemented. The number of insured persons entitled to medical benefit increased from 4,73,888 in 1958 to 6,19,396 in 1959. The number of insured persons registered with panel doctors was 4,73,888 in 1958. This increased to 4,94,170 in 1959. Besides the Allopathic Medical Practitioners, Ayurvedic and Unani Practitioners were also included in the Panel of Insurance Medical Practitioners. 500 general beds were reserved in various Government, private and charitable hospitals in various localities nearer to industrial areas. During 1959 one full time Radiologist was appointed in place of 3 part time Radiologists.

Bihar : The work relating to the Employees' State Insurance Scheme was carried out by 7 permanent and one part-time dispensaries. Permanent dispensaries were allocated to Jamalpur, Digha, Phulwari Sharif, Patna City, Monghyr, Katihar and Muktapur. The part-time dispensary was serving three days in a week at Samstipur for the insured persons of the power

house. The medical facilities as well as the facility for laboratory investigation were given to the insured persons and their family members. Insured persons were given immunisation facilities against smallpox and cholera etc. Beds were reserved for the insured persons in the State Hospitals. Provision was made for admission in the Mansik Arogyashala and Government Leprosy Centres for the insured persons.

Madras : Special attention was paid by the Inspectors of Factories towards protection of the workers against occupational diseases and maintenance of general health. Whenever contraventions of the provisions relating to the health of industrial workers were noticed, orders pointing out such contraventions were issued to the occupiers and managers of factories in addition to giving suggestions in person to improve health conditions of the workers. Full and part-time Medical Officers were appointed in big factories to render medical treatment to the workers suffering from occupational diseases. In some of the factories medical practitioners were engaged on a call basis and thus proper and adequate attention was paid to the protection of health workers in those factories.

Mysore : Inspectors were appointed to enforce the various provisions of the Factory Act. As regards industries exposed to the risk of silicosis, the Mysore Silicosis Rules were made applicable to them so that the health of workers may not be jeopardized.

The Employees' State Insurance Scheme was put into operation in 1958. Insured persons were entitled to various benefits, including dependent benefit, through the agency of the Deputy Regional Director. At the end of the year 1959, the total number of insured persons were 68,581. The number of persons admitted into hospitals were 4,608.

Orissa : The Employees' State Insurance Scheme was scheduled to be implemented in Baranga, Cuttack Choudwar, Brajarajnagar and Rajgungpur in early part of 1959 but mainly owing to non-availability of trained medical and para-medical personnel in the State the scheme could not be implemented in time. The budget provision for the scheme during 1959-60 was Rs. 5·48 lakhs.

Punjab : The Employees' State Insurance Scheme was scheduled to be extended to the new areas *viz.*, Faridabad, Kapurthala, Phagwara, Sonepat, Khasa Dhariwal during 1959. In order to extend the scheme to other areas, the Assistant Director of Health Services (Social Insurance) of the Punjab State carried out the survey of these areas.

Uttar Pradesh : The Industrial Health Organisation, Uttar Pradesh with its headquarters at Kanpur reviewed the implementation of health provisions as existed in Factory Act. Based on the reports received by Inspectors from 24 factories in Kanpur and 30 outside, advice was given with regard to health hazards concerning excessive heat, dust nuisance and appropriate provision of protective water supply and sanitary disposal of excreta, latrines and urinals, adequate lighting arrangements and use of personal protective measures, the problem of byssinosis affecting the workers in cotton, jute and wool factories was studied and it was observed that 1·5 per cent of the cotton mill workers only, and one per cent in wool and jute mill workers were affected.

The Employees' State Insurance Scheme was started in Kanpur in 1952. During 1959 it was extended to Mirzapur, Sahjanwa (Gorakhpur), Modinagar, Gobindpuri and Ghaziabad (Meerut). The medical benefits under this scheme rendered medical services at 35 fixed and 5 mobile dispensaries. These dispensaries, were located near the residences of the workers. 2,52,194 insured persons were getting treatment of whom 2,745 cases were admitted into the hospitals.

West Bengal : The Industrial Hygiene Section of the Directorate of Health Services, Calcutta since its inception nearly 9 years ago, played an important part in improving the hygienic conditions of the people associated with the various industries and manufacturing concerns.

Several mills and factories were inspected for ascertaining health and welfare services and cooperated with the industrial managements to their workers for the improvement and better functioning. Several representations from the local bodies, public and other associations relating to the site for establishment of factories, smoke nuisance, pollution of water or atmosphere etc., were looked into and necessary steps taken to remove the defects that were detrimental to the health and welfare of the public and employees of the industrial concerns. Besides, the study of health problem inside the factory, attention was paid on environmental situation of the factory sites.

During 1959, the Employees' State Insurance Scheme remained operative in Calcutta and Howrah covering an average insurable population of 26,000. It was decided to extend this Scheme to 24 Parganas and Hooghly districts during the year under report.

(vii) Health of Prisoners

In 1959 there were 1,102 different types of jails in India excluding the they are based on accurate diagnosis of ailments and cause of deaths unlike the general population where such facilities are lacking.

In 1959 there were 1,102 different types of gails in India excluding the States of Jammu and Kashmir, Madhya Pradesh, the Union Territories of Delhi and Pondicherry from where information was not received. Out of 1,102 jails there were 53 central, 148 district, 872 subsidiary, 14, special 2 temporary, 2 juvenile jails and 11 brostal schools. The distribution of different types of jails in the various States of India is given in Table No. 26.

The average daily population in jails against authorised accommodation excluding hospitals and observation cells in the States during 1958 and 1959 is given in Table No. 27. The authorised accommodation increased substantially in 1959 in jails of Bihar, Kerala and Tripura. There was also some increase in Uttar Pradesh, West Bengal and Andaman and Nicobar Islands. There was a sharp drop in Andhra Pradesh but slight decrease in Orissa, Punjab and Himachal Pradesh. The daily average population in 1959 was more than that in 1958 in all the States except Assam, Bihar and Rajasthan where a slight decrease was noticed. For measures of congestion in jails an index *viz.*, the average number of prisoners per 100 unit of authorised accommodation was worked out and is shown in Table No. 27. Taking arbitrary that 20 per cent of the overcrowding will be moderate and above that it will be heavy, it will be observed that in 1959 there was

heavy overcrowding in jails of Andhra Pradesh, Madras and Tripura and moderate in Bihar and West Bengal. In other States the authorised accommodation was well sufficient for the average daily population.

Hospitalisation facilities for sick prisoners were available in almost all the jails of the States except Andhra Pradesh and Manipur. Special facilities for treatment of prisoners suffering from T.B., V.D., Leprosy etc., were available only in few jails of Bombay, Punjab and West Bengal where special wards and clinics were opened for the purposes. In other States arrangements were made in nearby Government sanatoria and clinics for the prisoners suffering from T.B., V.D., Leprosy etc.

The hospital admissions and death rates per mille of average daily population together with the constantly sick rates per mille of average daily population during 1958 and 1959 are given in Table No. 28. The hospital admission rate in 1959 was highest in Himachal Pradesh followed by Orissa, Mysore, Kerala, Rajasthan, Punjab, Bihar, Bombay, Manipur, Tripura, West Bengal, Assam and Uttar Pradesh. In 1959 the highest death rate and constantly sick rate per mille of average daily population were recorded in jails of Andhra Pradesh and Andaman and Nicobar Islands respectively. The various causes of sickness *viz.*, Dysentery and Diarrhoea, Malaria, Influenza, Pyrexia of Unknown Origin, other Respiratory Diseases and deficiency diseases accounted for a large number of admissions in Jails' hospitals of most of the States and the statistical data to this effect are given in Table No. 29.

Case fatality rates *i.e.*, deaths per 100 of hospital admissions during the years 1958 and 1959 are given in Table No. 30. It will be seen that in 1959 the case fatality rate was higher than that recorded in 1958 due to Anaemia, T.B. of Lungs and Dysentery in Andhra Pradesh; Anaemia in Assam; Pneumonia in Bombay; Respiratory Diseases and Deficiency Diseases in Kerala; Enteric Fever, Pneumonia and Anaemia in Madras; Pneumonia, Dysentery, Pyrexia of Unknown Origin and Respiratory Diseases in Orissa ; Smallpox, Pneumonia and Dysentery in Uttar Pradesh ; Cholera and Anaemia in West Bengal. In other States for which comparative information for 1958 is available the rates remained more or less the same.

During 1959 an overall increase in death rates per mille of average daily population was recorded in jails of Andhra Pradesh, Bombay, Kerala and Orissa. This increase was due to increase in deaths due to T.B. of Lungs, Dysentery, Respiratory Diseases, Anaemia in Andhra Pradesh; Enteric Fever, Pneumonia, Dysentery and other Respiratory Diseases in Bombay; Respiratory Diseases and other deficiency diseases in Kerala; Malaria, Pneumonia, Dysentery, Anaemia and Pyrexia of Unknown Origin in Orissa. The death rates recorded in various jails of different States in India are given in Table No. 31.

Prophylactic measures such as anti-cholera inoculations, smallpox vaccinations, anti-plague inoculations and BCG vaccinations were carried out in jails of the States and the statistical data are presented in Table No. 32.

Increase and decrease in weight is generally interpreted as improvement and deterioration in physical standard of prisoners respectively. The prisoners were weighed at the end of each year in all jails, as a matter of routine. Table No. 33 shows the percentages of prisoners, who gained

weight, remained stationary and who lost weight during the years 1958 and 1959. More than 50 per cent of the prisoners gained weight in jails of Bihar, Kerala, Madras, Orissa, Rajasthan and Himachal Pradesh. The percentage increase of loss in weight when compared with 1958 data was recorded in jails of Bihar, Madras, Manipur and Himachal Pradesh. The highest percentage of loss in weight was reported from Manipur followed by Himachal Pradesh.

The Jail Authorities were particularly careful about the scale and quality of diet supplied to prisoners. Sick prisoners were given special diet as prescribed by the Medical Officers from time to time.

Facilities for recreation and literary amenities were available in the jails of almost all the States in the country. Film shows on informative subjects and lectures on normal topics were also arranged. Out-door and in-door games were also provided in jails of some of the States in the country.

In accordance with the present policy of reformation and rehabilitation of prisoners as against deterrence followed during pre-independence days the Punjab State took measures for their moral, social and mental uplift with a view to change the attitude and implant in them new value and outlook of life. Special attention was paid to their education, health and recreation. Elementary adult education was compulsory for the prisoners which was conducted by paid teachers assisted by convict teachers who were given reward and remission.

In Uttar Pradesh the Panchayat System was extended to all the jails during the year under report.

Parole system (release of prisoners for short periods under suspension of sentence) was introduced in jails of Andhra Pradesh to enable the prisoners to attend to serious illness, death or marriage of any member of the family of near relative.

The Government of Orissa had accorded permission to one of the post-graduate students of Ravenshaw College, Cuttack to conduct an experiment on the problem of "The Level of Aspiration in Juvenile Delinquents" in juvenile jails at Angul and in attached jails.

(viii) Fairs and Festivals

Fairs and festivals in India are held in great numbers. They are usually in relation to some or the other religious events. To prevent the outbreak of any epidemic diseases the State Health Authorities concerned take all the preventive and curative measures. The statistics of the work done during the various fairs and festivals held in the country during the year 1959 is given in Table No. 34. A brief summary of the fairs and festivals held in each State, together with preventive measures undertaken to check the spread of the epidemic diseases, is given below:—

Andhra Pradesh: 115 fairs and festivals were held during the year under review. The total congregation was 32,31,000. Usual public health arrangements such as safe drinking water supply and sanitary arrangements were made. The mass prophylactic anti-cholera inoculations and vaccinations were performed. There was no out-break of epidemic during the melas.

Assam : Seven festivals of 9,000 congregation each were held during the year 1959. All necessary steps were taken by the State Health Department to prevent the out-break of epidemics in the fairs and festivals. There was no out-break of any infectious diseases.

Kerala : 126 fairs and festivals of 32 lakhs of congregation were held and passed off without out-break of any epidemics. Two sheds of Infectious Diseases Hospitals were opened. 541 anti-cholera inoculations and 59,843 smallpox vaccinations were performed.

Madhya Pradesh : Thirty important fairs of 1,660,000 congregation were held. To prevent out-break of epidemics all possible precautions were taken and sufficient extra staff was employed. Anti-cholera inoculations were performed at several places. Public health procedures and techniques remained successful.

Madras : As usual, adequate sanitary arrangements were made during the period of all the fairs and festivals. About 500 festivals were conducted and all the festivals passed off without any out-break of epidemic diseases. The Authorities-in-Charge of fairs and festivals generally carried out the suggestions of the State Health Department regarding sanitary arrangements.

Bombay : In Bombay State fairs are generally divided into two categories *viz.*, fairs having congregation of 10,000 or more pilgrims which are known as major fairs and those having congregation of less than 10,000 pilgrims are known as minor fairs. During the year under review 12 major fairs were held. Adequate sanitary arrangements were made during the period of all the fairs. Anti-cholera inoculations were enforced especially for major fairs in order to check the spread of cholera epidemic. Satisfactory water supply arrangements were also made. All the fairs passed off with a clean bill of health.

Punjab : A number of important fairs were held in the State and passed off without out-break of any epidemics at any fair during the year under report. The usual preventive health measures such as provisions of sufficient supply of safe drinking water, adequate number of sanitary conveniences, the protection of foodstuffs for sale, anti-fly and anti-mosquitoes measures were undertaken. Arrangements were also made for isolation and treatment of cases of infectious diseases.

Rajasthan : 111 important fairs with total estimated population of 8,96,000, were held during the year under report. Six fairs were banned for the fear of out-break of epidemic diseases. The health staff visited the sites of the fairs and assisted the mela authorities in making health arrangements like urinals, latrines, drinking water, bathing places etc. The precautions for the prevention of adulteration and of contamination of edibles were undertaken. Where there were big congregations a mobile dispensary was arranged and isolation camps were established. Extra staff was also employed.

Himachal Pradesh : Ninteen fairs with a total congregation of 2,02,000 pilgrims were held without out-break of any epidemic diseases. Public health arrangements such as provisions of safe drinking water supply and disposal of human waste, inspection of edibles etc., were made. 208 pilgrims were inoculated and vaccinated.

Manipur : Two fairs were held in this territory and passed off safely without out-break of any epidemic diseases.

Pondicherry : Nine fairs with a total congregation of 40,000 were held in the territory and passed off without out-break of any epidemic diseases.

Tripura : Seven fairs were held during the year under review. 412 inoculations against cholera and 3,413 vaccinations were performed.

(ix) Nutrition and Welfare Food

Investigations carried out, under the auspices of the Indian Council of Medical Research, New Delhi, have indicated that nearly 2 per cent of our children between the age group of 1 to 5 years show clinical manifestations of protein malnutrition. In order to combat protein deficiency, skim milk obtained as a gift from UNICEF, is being distributed to expectant mothers, pre-school and school children through the maternity and Child Health Centres, Schools and Hospitals throughout the country.

Recent researches have also shown the importance of combination of vegetable proteins from lentils and oilseed cakes such as groundnut in meeting the protein deficiency in the diet. The Government of India are, therefore, planning to manufacture defatted processed groundnut flour on a large scale for fortifying multi-purpose food and other ready-to-eat products for child feeding programmes.

The Government of India, in collaboration with the State Government of Punjab and the Indian Council of Medical Research, New Delhi started the Goitre pilot survey project in Kangra district of Punjab State during the First Five Year Plan period in October, 1954 for control of Goitre with iodised/iodated salt.

Three comparable areas with a population of about 30,000 in each area of sub-Himalayan endemic zone had been selected for survey and supply of iodised/iodated salt. The Zone A consists of 33 villages. Zone B 30 villages and Zone C 16 villages. In the course of survey, 2,994 persons in Zone A, 3,139 persons in Zone B and 2,266 persons in Zone C were examined and the incidence rates respectively were 43 per cent 48·4 per cent and 40·1 per cent in these three zones. Besides, 2,447 children in Zone A 2,188 in Zone B and 2,195 in Zone C were examined.

Re-survey was started in May, 1959 *i.e.* 2 years and 5 months after supply of iodised/iodated salt to the population. The Survey Teams started Goitre survey work in NEFA, Himachal Pradesh and Nagaland in 1959.

Two of the deficiency disorders prevalent in certain regions, which are of public health importance, are Lathyrism and Fluorosis. Lathyrism is wide-spread in certain parts of Madhya Pradesh and Bihar and is attributed to the excessive use of Lathyrus Sativus (Khesari Dal) to the exclusion of cereals and protective foods such as vegetables, milk etc. The disease brings about paralysis of the lower limbs and has affected a number of poor landless labourers, especially the male population in these two States. This brings about not only economic loss but also lowers the health of the people.

The second deficiency disease *viz.*, Fluorosis, which is brought about by drinking water containing excessive fluoride, is endemic in certain parts of Andhra Pradesh and Punjab and brings about painful deformities of the bones. The Indian Council of Medical Research, New Delhi have formed Sub-committees for the investigations and control of these two diseases.

The work carried out by different States in regard to the improvement of nutritional status of the people is summarized below:—

Andhra Pradesh: The Nutrition Wing in the Public Health Directorate was manned by one Assistant Director of Public Health trained in Nutrition and assisted by Nutrition Health Officer, Biochemist, Chemical Assistant and two Laboratory Assistants and two Health Inspectors.

Besides, there were 3 Regional Nutrition Units one each at Kurnool, Guntur, and Warangal; each under the control of a Regional Nutrition Health Officer. They cover the area under their jurisdictions and carry out nutrition programmes of dietary and clinical nutrition assessments.

81 diet surveys consisting of 972 families were undertaken, besides 4 institutional surveys which were carried out during 1959. The nutrient analysis of the food stuffs consumed showed that there was deficiency of animal proteins, calcium, iron, vitamin A, B-complex and C.

During the year under report, nutrition survey of 4,290 school going children was carried out in middle and primary schools both in urban and rural areas to assess their nutritional status. Most of the children were in the lower grade and the incidence of deficiency signs and symptoms were more or less similar to that found among the members of families whose diet surveys were undertaken.

Ameliorative measures: Skim milk powder supplied by the UNICEF was distributed to the needy expectant and nursing mothers, school and pre-school children, through long range feeding programme to Maternity and Child Health Centres, Schools and Primary Health Centres. Besides, multi-vitamin tablets etc., were supplied to all Maternity and Child Health and Primary Health Centres for distribution. In some of the Maternity and Child Health Centres at Hyderabad, milk and eggs were also supplied at Government cost.

Bihar: The teaching of nutrition and dietetics along with field demonstration was a permanent feature in Medical Colleges of the State. Arrangements were made to start mid-day meals scheme in all the Primary Schools from 1959. There were 93 Maternity and Child Welfare Centres is the State which continued to receive the supply of skim and full cream milk, iron, calcium and multi-vitamin tablets for the expectant and nursing mothers and children.

For free distribution of milk to children, expectant and nursing mothers in the flood affected and scarcity areas, the Government opened centres throughout the State. The supply of skim milk was obtained as free gift from UNICEF and Red Cross Society.

The Goitre Pilot Project of the State Government continued to function during the year under review. A field survey on Lathyrism was carried out in six Lathyrism affected areas of Ranchi and Santhal Parganas

districts. Canteens attached to the industrial concerns were periodically inspected and necessary suggestions for improving food, hygiene and management were given to the authorities concerned.

Bombay : The enlarged Bombay State included the areas of Saurashtra, Vidarbha and Marathawada regions, where organised nutrition work needed to be undertaken during 1959. The State Government sanctioned the establishment of three Regional Nutrition Units—one each at Rajkot (for Saurashtra and Kutch), Nagpur (for Vidarbha Region) and Aurangabad (for Marathawada Region). The diet scales for hospitals, revised by the Department of Nutrition had been working satisfactorily. However, it was felt that each major hospital should have a trained dietician, who can be made responsible for the preparation and supervision of various diet scales, management of the kitchen and preparation of therapeutic diet, etc. As a result of extensive study of dietary condition in several industrial canteens, the appointment of a full-time Officer had been recommended by the State Government.

During 1959, a manual entitled 'Diet Manual a Compilation of Diets Recommended in Health and Diseases' had been published by the State Government as a monograph. In order to provide basic data regarding the dietary conditions and nutritional status of tribal population of *Warlis* (an Advisi Tribe of Thana District), field studies amongst them were undertaken during the year under report. The periodical clinical check up in connection with evaluation of a programme of food supplement (1 oz. of chikki and 6 oz. of toned milk) in two Bombay Municipal Primary Schools continued. Studies on problems relating to maternal and child nutrition also continued.

As part of nutrition education, the trained field staff continued to give popular talks through with film shows on various aspects of public health nutrition.

Kerala : A study on protein malnutrition was undertaken by the Nutrition Division. The object of the study was to substitute a cheaper and easily available vegetable protein in place of animal protein in cases of protein malnutrition. This involves giving whole groundnuts without defatting in a platable preparation for cases of protein malnutrition. Cases of full fledged protein malnutrition were undertaken for study. In addition to 4 oz. of ground nuts and 2½ oz. of jaggery, diet consisting of rice 4 oz., bread 2 oz., dal or green gram 1 oz., cow's milk 3 oz., vegetable 2 oz., were also given to each child per day. The whole diet supplied 57·5 gms. of protein and 1,615 calories. The ground nut diet was prepared in the laboratory. Only very few cases were available for the study. 44 cases were given ground-nut diet and 19 children were on a diet containing skim milk powder instead of ground-nut. The study continued during the year under review.

Madras : The diet studies on occupational basis were continued among 344 families representing weavers, factory workers, sweepers etc., in Madras City and in Chingleput, North Arcot, South Arcot, Madurai and Tirunelveli districts of the State during the year under review.

In the Nutrition Laboratory, analysis of institutional diets and raw and cooked foods was carried out towards assessment of their nutritive values.

The scheme of distribution of UNICEFs milk to expectant mothers and children under 14 years of age was continued. The UNICEF donated 6 lakh pounds of skim milk powder during 1959. About 5·5 lakhs of children attending over 18,500 elementary schools were given free mid-day meals under the scheme run by the Education Department, the Harijan Welfare Department and under the Corporation of Madras during the year under review.

Madhya Pradesh : The number of nutrition surveys carried out were 419. The nutrition survey was carried out in families in villages and amongst school children. Amongst deficiency diseases, conjunctival xerosis, night blindness, gingivitis were commonly found. Due to lack of animal fats in the diet, the people showed deficiency of vitamin A, particularly during the winter season. During the diet survey of the same regions, vitamin C deficiency was also prevalent.

Lathyrism was a nutritional disease, afflicting a large number of younger people, belonging to poor or middle class peasantry in Vindhya Pradesh Region. During 1959, a random survey of Lathyrism was carried out in 20 villages of Satna district and about 7,000 Lathyrism patients were estimated. Out of 5,768 people examined in 18 villages of Rewa district, 240 cases of Lathyrism were detected. The common age incidence of Lathyrism was found to be between the age group of 11 to 30 years and they were more common in males than in females.

Mysore : Amongst the out-patients at least one third of medical cases showed evidence of malnutrition predominantly protein deficiency, iron deficiency and avitaminosis. The commonest cause of iron deficiency being secondary to poor nutritional intake and parasitic infection mainly ankylostenasis. Liberal supply of milk diet and oral and parentaral protein hydrolysate improved the conditions.

Orissa : For feeding school going children, expectant and nursing mothers and patients in hospitals, UNICEF supplied 150,000 lbs. of milk powder as free gift.

Punjab : Three dietary surveys were carried out in rural areas of Amritsar district during 1959. The diet on the whole was found to be satisfactory, except for milk, vegetables and fruit. Necessary recommendations were made on the spot to use milk (if milk is not available, to use butter milk), vegetables in raw state, leafy vegetables and seasonal fruits.

The Nutrional Assessment Survey was conducted in 108 schools of rural areas of Amritsar district and 9,287 school children (7,296 boys and 1,991 girls) were examined during the year under review. Out of 9,287 children, 6,004 were found to be free from any deficiency condition. The incidence of trachoma was high.

The distribution of skim milk powder throughout the State and iodised salt in Kangra district was continude for the benefit of the needy groups. Six exhibitions were arranged at different places in the State by the Nutritional Bureau during the year under report.

The re-survey was undertaken under the Goitre Pilot Project in Kangra district and iodised/iodated salt was supplied. The survey was conducted amongst the general population as well as in schools thereby covering a

total population of 15,000. The results obtained indicated a down-ward trend in the incidence of goitre by mass scale intake of supplemental iodine in the form of iodised/iodated salt.

In Rajendra Hospital, Patiala, the out-door and in-door patients suffering from special disorders such as Diabetes, Nephritis, etc., were given advice by qualified Dieticians. Food and Nutrition in Health and Diseases was taught to the Nurses as special subject by the Dieticians.

Rajasthan: With the establishment and organisation of a separate nutrition scheme under the Second Five Year Plan period, a detailed Nutrition Survey, including Dietary Clinical and Economic Survey, was undertaken.

180 families were surveyed in 7 different places of Rajasthan having average income ranging between Rs. 80-100 per month. The above families were mostly labourers, farmers and agricultural workers. Bajra in winter and Barley in summer formed the staple food of diet. The intake of milk on an average was about 3 oz. per consumption unit. The average protein vitamin A and C and calcium intake was below normal. The diets in general were grossly ill-balanced in all the villages surveyed.

As an amelioratie measure, free distribution of skim milk, multi-vitamin tablets, iron pills and multi-purpose food were adopted.

The knowledge of nutrition was disseminated in the rural population through nutrition exhibitions and popular lectures.

West Bengal: The Diet and Nutrition Surveys were carried out in different parts of the State. The diet survey revealed predominance of cereals, deficiency of milk, milk products and other protective food-stuffs as the most significant features of the composition of average diet. Poverty and ignorance were mainly responsible for this stage of affairs.

Nutrition surveys conducted in schools showed that about 61 per cent of students examined were having nutritional deficiency symptoms of one type or the other. The typical nutritional disorders included angular stomatitis, glossitis, night blindness, caries teeth, spongy and bleeding gums and poor health in general.

Goitre was an andemic problem in sub-Himalaya regions of the State, particularly in Darjeeling and Jalpaiguri districts. With a view to ascertain the incidence of this iodine deficiency disease, surveys were conducted by the State Health Directorate with the assistance of UNICEF and the Governmnt of India.

A scheme had been under consideration for establishment of a nutrition set-up at the State level consisting of a laboratory and an attached field service wing for carrying out investigations and especially nutrition education amongst people to enable them to choose nutritious foods within their economic means and resources.

Himachal Pradesh: The nutritive value of the diet of the people in general in this Pradesh was very poor. Diet supplements received from UNICEF were distributed free to the poor and vulnerable groups, expectant mothers through various Medical and Public Health Institutions as well as through schools. The staple diet of the people consists of wheat, maize

and rice. The deficiencies in diet were more or less due to lack of vegetable and animal proteins. The total calories were made up of mostly carbohydrates. It was revealed that the fat and vitamin content of the diet in general were below normal during the year under review.

Andaman and Nicobar Islands: The work on food and nutrition had not created a problem as the standard of living in this territory is higher in comparison to mainland people of low standard. There was a scheme of school Feeding under the Second Five Year Plan period. Under the scheme 8 ozs. of reconstituted milk and nutritious snacks at the rate of 6 np per child per school-day were given free to school children. On an average 1953 school children were benefitted on each school day during the year 1959. Besides, mothers and children of lower income group were supplied with UNICEF milk powder free of cost through the Maternity and Child Health Centres attached to the Civil Hospital, Port Blair.

Talks on food and nutrition were given to people by the Public Health staff on different occasions during the year under review.

(x) Adulteration of Food Stuffs

Adulteration is the debasing of a commodity by admixture of foreign, inferior or harmful material or by reducing its grade below, which is represented to be to the loss or disadvantage of the user either in money or in service rendered.

Laws existed in a number of States in India for the prevention of adulteration of foodstuffs, but having been passed at different times without mutual consultation between States, they lacked uniformity. To have uniformity on an all India level, an Act entitled "The Prevention of Food Adulteration Act, 1954" was enacted by Parliament. The Act came into operation throughout the country, except in the State of Jammu and Kashmir, on 1st June, 1955. This Act makes it penal to sell adulterated articles.

The number of food samples examined, found adulterated, number of prosecutions launched, number of persons punished and the fine realised from adulterators in different States in India during 1959 is given in Table No. 35.

The activities of the State Health Authorities in this regard are detailed below:—

Andhra Pradesh: The Prevention of Food Adulteration Act, 1954 was enforced in 1955 and it could not be implemented in Telengana component due to inadequate laboratory facilities. Action was proposed to be taken to implement it. The Municipal Health Officers, Sanitary Inspectors were delegated the powers of Food Inspectors. Samples of edibles were taken and sent for examination to the Government Analyst, Laboratory at the King Institute Guindy, Madras. Nearly 40 per cent of the total edibles examined were found to be adulterated. Milk, milk products (Butter) and ghee formed more than 50 per cent of adulteration. 1,275 prosecutions were launched, 1,504 were punished and a fine of Rs. 62,716 was realised during the year review.

Assam: The Prevention of Food Adulteration Act, 1954, the Prevention of Food Adulteration Rules, 1955 and Assam Food Rules, 1949 were in force. The Deputy Director of Health Services, Jorhat and Gauhati

Civil Surgeons, Sub-Divisional Medical and Health Officers, Assistant Surgeons Grade I and II, Urban Health Officers, Sanitary and Health Inspectors, Railway Medical Officers, Assistant Health Officers, Shillong Cantonment Board were given the powers of the Food Inspectors for the area under their jurisdictions. Samples of edibles were taken and sent for examination at the State Public Health Laboratory, Shillong. Out of 219 samples of milk examined, 148 *i.e.* 65·3 per cent were found to be adulterated. Water, skimming of milk fat, skim milk powder were mostly used as adulterants.

Bombay: The Prevention of Food Adulteration Act, 1954 and Rules 1955 were in force in this State. The Act was made applicable in most of the local bodies. In areas where the Act was enforced, possible action was taken under the provision of the Indian Penal Code. The general Sanitary Inspectors of the local bodies were made Food Inspectors of the respective local bodies. In some areas the Medical Officers of Health of the local bodies were notified as Food Inspectors. In 1959, there were three laboratories viz., Public Health Laboratory, Poona, Nagpur and Research Food Laboratory, Amraoti where samples of foods were examined. Milk, milk products and ghee were found to be mostly adulterated. Prosecutions were launched against 7,564 cases; 6,449 were prosecuted and an amount of Rs. 2,71,133 was realised as fine from them.

Kerala: The Municipal Health Officers, Municipal Health Inspectors and Health Inspectors of the Health Department were delegated the powers of Food Inspectors. The number of food samples of different categories examined and the number found adulterated during the year under report are detailed below:—

Categories	Number examined	Number found adulterated	Percentage of adulteration to total examined
1. Milk	1,772	915	51·64
2. Milk products	95	40	42·10
3. Ghee	147	11	7·48
4. Edible oils	1,073	31	2·89
5. Grams flour	680	228	33·53
6. Other food-stuffs	2,087	300	14·37
TOTAL	5,854	1,525	26·05

Milk was one of the most heavily adulterated foods, the most common adulterants being water and fluid reconstituted from skim milk powder. The milk products found to be heavily adulterated were curd, butter, ice cream and starch etc., the former two with water and the third one with milk powder. The grams and flours were found to be coloured with metanil yellow to impart improved appearance. Lac dhall and lac dhall flour were mixed with toor dhall flour and black grams flour. During the year under review 1,110 prosecutions were launched, 801 persons were punished and Rs. 52,635 were realised as fine from them.

Madhya Pradesh : The Prevention of Food Adulteration Act, 1954 was in force throughout the State. The rules framed under Section 24 of the said Act were under consideration of the State Government. In the mean-time the rules framed by the Government of India were followed up. The work of analysis of food was done at Corporation's Laboratories at Indore and Jabalpur as well as State Laboratories at Indore, Jabalpur, Bhopal, Raipur, Rewa and Gwalior.

The State Government had accorded sanction to the up-grading of the existing Laboratories at Gwalior, Raipur and Jabalpur so as to conform to the approved pattern of regional laboratory. The additional staff was recruited.

In the Third Five Year Plan period one Principal Laboratory (with Medico-Legal Laboratory), six Regional Laboratories and thirty three District Laboratories were proposed and a provision of 21 lakhs was made for recurring as well as capital expenditure. It was expected that there would be more effective implementation of the Act with the establishment of these laboratories.

During the first six months of the year under report, 348 prosecutions were launched, 146 persons were convicted and Rs. 20,977 were realised as fine from them. Out of 1,298 samples of edibles examined, 554 were found to be adulterated.

Madras : The Government Analyst continued to analyse food samples from local bodies under the Prevention of Food Adulteration Act, 1954. 11,572 samples of edibles were received from 63 Municipalities and 96 Panchayats. Of these 6,751 samples were analysed and 24·5 per cent were found to be adulterated as against 34·2 per cent in 1958. Adulteration was found to be high in samples of buttter, milk and ghee. On the recommendation of the Public Health Board, the State Government had transferred the Government Analyst's Department from the administrative control of the Director of Medical Services to that of the Director of Public Health from 16-10-1959.

Punjab : In both the State Food Laboratories 14,645 samples were analysed during the year 1959 as compared with 12,928 samples during the previous year. The percentage of food adulterated during the year was 25·1.

Rajasthan : The food samples were examined under the Prevention of Food Adulteration Act, 1954 at the Government Laboratories at Jaipur, Jodhpur, Alwar and Udaipur, 14,365 food samples were examined and 5,101 were found to be adulterated giving a percentage of 35·5. Ghee and milk were heavily adulterated.

Uttar Pradesh : The Prevention of Food Adulteration Act, 1954 and rules framed thereunder and some provisions of the Uttar Pradesh Pure Food Rules, 1952 were in operation in the State. Besides, hygienic law for trade in foodstuffs enforced by various Municipalities and District Boards also remained operative within their respective jurisdictions.

The powers of Food Inspectors were delegated to all the Medical Officers of Health, District Medical Officers of Health, Chief Sanitary Inspectors, Sanitary Inspectors, Railway Medical Officers, Railway Sanitary Inspectors, Port Health Officers, Airport Health Officers and Executive Officers of local areas, where there was no sanitary staff.

28,441 food samples were analysed at the Public Analyst Laboratory to the Government of Uttar Pradesh, Lucknow of which 21·6 per cent was found to be adulterated. The percentages of adulteration in milk and cereal was 25·1 and 20·6 respectively.

During the year under report 6,299 persons were prosecuted for adulteration, 3,746 were convicted and about Rs. 3,43,714 as fine was realised from them. In 76 cases sentence of imprisonment for various terms was also passed.

Himachal Pradesh : The Prevention of Food Adulteration Act, 1954 was enforced. The District Medical Officers, Medical Officers of Health, Medical Officer-in-Charge of Tehsil Hospital and Dispensaries, Superintendents of Vaccinations and Sanitary Inspectors posted in each Tehsil were delegated with the powers of Food Inspectors. Under the Act, 223 samples of food samples were sent to Public Analyst Punjab for examination of which 111 were found to be adulterated. Adulteration was heavy in case of milk (39·0 per cent) and ghee (48·7 per cent). 107 persons were prosecuted, 45 were punished and Rs. 4,045 were collected as fine from them.

Tripura : Ten Sanitary Inspectors, each posted in each sub-divisional headquarters and having a sub-division under his jurisdiction, were delegated with powers of Food Inspectors under the provision of Food Adulteration Act, 1954.

Samples of food were examined under this Act. 45 samples out of 113 examined were found to be adulterated. Milk, oil and butter were found to be heavily adulterated. In Agartala Municipality prosecutions were launched against 68 persons of whom 21 were punished. An amount of Rs. 2,760 was realised as fine from the offenders.

Pondicherry : The following Acts were in force for the prosecution of food adulteration :—

1. The Act of 1st August, 1905.
2. The Act of 5th August, 1908.
3. The Act of 25th July, 1912.
4. The Act of 20th March, 1919.

(The decree of 13th October, 1927 promulgated in the State by the Order of the 24th November, 1925, J.O. 1927 P-729 and subsequent).

5. The decree of 12th June, 1931.
6. The Act of 15th February, 1937.
7. The decree of 7th May, 1935.
8. The decree of 12th June, 1932.

In exercise of the Order No. 3 of the decree dated 13th October, 1927, the officials of the Revenue Department, the Commissioner of Police and the Inspectors of Markets were authorised to make a search, take samples and seize the articles put on sales.

Samples of food were analysed in Government Pharmacy, Pondicherry by a Pharmacist holding a diploma in pharmacy (Paris).

10 hotels and 3 Soda Water Factories were ordered to be closed for 10 days to one month for adulteration of food stuffs during the year under report.

(xi) Railways' Health Services

There were eight different railways, grouped according to regions, *viz.*, Northern, Southern, Eastern, Western, Central, North Eastern, South-Eastern and North East Frontier Railway during the year 1959. Each railway had its own medical and public health organisation which caters to the needs of the staff employed in railways and looks after the sanitation at railway stations and colonies. The Chittaranjan Locomotive Works has also its own Organisation to cater to the needs of the staff employed therein.

In 1959 an overall improvement in medical and public health facilities offered by each railway to their employees was noticed. The detailed information is given below:—

All railway systems had well equipped hospitals and dispensaries, some of which had arrangements for X-ray and employed advanced methods of treatment. The number of beds in hospitals and dispensaries run by different railways were increasd from 4,078 during 1958 to 4,582 in 1959. During the year under report all railways except Central had their own T.B. Sanatoria and Clinics exclusively meant for their staff. There were now 45 such sanatoria and clinics with a bed strength of 228 as against 32 sanatoria with a bed strength of 125 during 1958. Besides, the railway administration had increased the number of beds by 48 per cent by having reservation in nearby public sanatoria for treatment of their employees. The Railway-wise break-up of the information regarding the number of hospitals, dispensaries, beds, etc., is shown in Table No. 36. The medical and health personnel employed in different railways also show a proportionate increase during the year 1959 and are shown in Table No. 37.

Each railway had maintained Maternity and Child Welfare Centres with grants from the Staff Benefit Fund to cater auxiliary services to families of their employees. During the year under report each railway showed an increase in such Centres, beds, staff employed therein, home visits, etc., which are shown in Table No. 38.

Usual anti-malarial control measures were undertaken by all the railways. The National Malaria Eradication Programme was launched from April, 1959 in South Eastern Railway and intensive D.D.T. spraying operations were carried out by the respective N.M.E.P. Units of the States. The N.M.E.P., which completed its one year in North Eastern Frontier Railway, had entered into second year of the work. For other effective measures undertaken by each railway for malaria eradication can be seen in Table No. 39.

The sanitary conditions of the railway stations and colonies was satisfactory. Sanitation of railway colonies was affected through Sanitary Board and Sanitation Committees by employing considerable staff. The sanitation of important stations was the responsibility of the Sanitary Committees which were under the control of the medical departments of each railway.

The North Eastern Frontier Railway observed. "Cleanliness and Sanitary Week" with a spirit of "Shramdan" offered by students, N.C.C. Cadets and railway personnel. Railway week was also observed from 10th to 16th April, 1959 when sanitation and cleanliness was one of the main features. In order to keep the stations and their premises clean and tidy a scheme called "Best Kept Station Scheme" was introduced in North Eastern Railway under which all the railway stations on this railway administration were divided into three categories, *i.e.* 'A', 'B' and 'C'. The best kept station under each category was awarded cash prizes and certificates.

The general health of the staff and their families was satisfactory almost in all the railways. During the year 1959 there was no unusual epidemic of any disease. Diseases like Dysentery and Diarrhoea, T.B. Fevers accounted for high rates of sickness among railway population and the morbidity and mortality statistics due to various causes of sickness are shown in Table No. 40. Effective immunization programmes were carried out in all the railways. Low morbidity and mortality due to Cholera, Smallpox and Plague is an index of the mass immunization programme carried out in the railways and the number of immunisations against Cholera, Plague and Smallpox etc., are presented in Table No. 41.

Systematic examination of food-stuffs in refreshment rooms, foodstalls and other food-stuffs sold by vendors at stations and colonies were conducted by the medical staff. On such occasions as fairs and festivals special arrangements and other preventive measures were undertaken to safeguard the health of the travelling public attending melas. Immunisation against Cholera and Smallpox were intensified during the festivals' days. Arrangements for the supply of potable water were made and the samples were regularly examined prior to and during the period of melas.

The expenditure figures incurred on Medical and Public Health Services during the fiscal years 1959-60 and 1958-59 are shown in Table No. 42.

(xii) Health Education

New schemes for the Central Health Education Bureau were sanctioned by the Ministry of Health. These included the starting of the Methods Division in the Bureau and the establishment of the Health Education Bureaux in the States. The School Health Education Project was also started during the year under report. The Bureau also participated in various training programmes and rendered technical assistance to a number of organisations in the country.

For the Methods Division in the Bureau additional technical and ministerial hands were required and efforts to recruit the personnel were taken in hand. Dr. J. Grossman, the Adviser assigned by the Technical Cooperation Mission of the United States to the Training Project, joined the Bureau in April, 1959.

The Central Council of Health at its seventh meeting held at Shillong in January, 1959 expressed the urgent need for setting up of the Health Education Bureaux in the States. The Ministry of Health sanctioned the scheme for starting of the Health Education Bureaux in various States

in the country in February, 1959. Seven States were agreed to set up the Bureaux during 1959-60. The Central Government will meet 50 per cent of the recurring expenditure and 100 per cent of the non-recurring expenditure of the scheme. The UNICEF, WHO and TCM (USA) will be participating in the programme.

The 12th World Health Assembly held at Geneva in May, 1959 had health education as the subject for technical discussion. The suggested outlines for discussion were sent by the World Health Organisation to all member countries with a view to assist in the organisation of discussions of each country and send reports for the preparation of a document for discussions at the Assembly. Copies of the suggested outlines for discussions were sent by the Bureau to all the States in India and to the organisations conducting public health programmes. On the basis of the reports received from the States, the Bureau compiled a final report entitled "Health Education in India—Past, Present and Future". This was sent by the Union Health Ministry to the Director General, World Health Organisation, Geneva. The report was circulated by the World Health Organisation among health education specialists attending the technical discussions. The Indian delegation to the Assembly took active part in the technical discussions, which were conducted under the Chairmanship of Dr. A. L. Mudaliar. The Director General of Health Services was appointed as the Chairman of a group and Assistant Director (Health Education) as the rapporteur. The health education material produced by the Central Health Education Bureau was displayed at the World Health Organisation Library and was also distributed to the delegates.

The Bureau organised a conference of health educators in India, the first conference of its type in the country, in April, 1959 in conjunction with the Fourth Research-*cum*-Action Conference. Panel and group discussions on various aspects of health education programme were held. The Conference reviewed the present stage of development of health education in the country and discussed its future programmes for its promotion during the Third Five Year Plan period. The group recommended that increased facilities should be made available for training health educators in the country. The health educators visited the Bureau where the organisation and functions of the various sections were explained. Books on health education were available in the Bureau's Library and the other health education material was displayed. The health education material received from the States was classified subject-wise and displayed during the conference at Najafgarh (Delhi).

The Media Division, among other things, aims at producing effective "type" (sample) media for use by medical and other health personnel and at pretesting and evaluating health education material. It also seeks to interpret the policies and programmes of the Union Ministry of Health.

Swasth Hind

Swasth Hind, the monthly bulletin of the Bureau, had completed its third year of publication in December, 1959. The journal which started with six pages, now carries about 20 pages on an average. Five special numbers of the journal were brought out during the year under report, which related to Family Planning (January), World Health Day (March), Leprosy (May), Children's Day (November) and Family Planning (December). The September issue of the journal carried a number of articles on various aspects of nursing.

During the year under review, a few new features were introduced in the journal. A centre-spread picture story is published with a short write-up on the subject selected. The new sections "News from the States" and "Family Planning News" were introduced under the head "Doctors Talk it Over". The journal publishes talks on health subjects arranged by the Indian Council of Medical Research and broadcast by the All India Radio, during 1956-58. A subject index for the Second Volume of Swasth Hind (January to December, 1958) was issued during the year under report.

Swasth Hind has a good reception from India and abroad. The Medical Officer of Health, Health Unit, Bawla, had said that Swasth Hind "Will help a great deal in giving orientation in rural health to the medical graduates".

The Secretary of the Hind Kusht Nivaran Sangh said that the "Leprosy Number (May)" was well got up and he thought that the journal should be in the hands of every one of the Medical Officers of the Government, Study and Treatment Centres and Subsidiary Centres".

Pamphlets and Brochures

A number of pamphlets, brochures and leaflets in Hindi and English on health subjects were designed, pretested and published, which were 19 in number as against 9 in the preceding year. A New series of brochures on the "National Health Problems" was started in order to focus public attention on various diseases that cause suffering in the country. The brochures are written in a non-technical language and are intended to stimulate general interest in health problems. Two brochures *viz.*, "Malaria in India" and "Leprosy in India" were also published during the year under report.

The Bureau arranged for the sale of the brochures and a booklet 'Menus for Low-Cost Balanced Diet—Suitable for South India' to the Members of Parliament at their residences. 500 such copies were sold. Reactions of the Members of Parliament towards the health schemes and the brochures and booklets in particular have been useful for further development of the work. Besides, the Bureau produced the following publications:—

(1) Family Planning in India (Report) (2) Family Planning—Programme and Progress 1956-58 (3) Family Planning Training and Research Centre (Report) (4) Contraceptive Testing Unit (Report) (5) Family Planning—A few Questions Answered (6) Family Planning—Practice for Prosperity (7) Bachon Ki Vyavaharic Samasyayin (Hindi) (8) Nursing Mirror (Series I) (9) Menus for Low Cost Balanced Diet—Suitable for South India (10) Care of the Eye (11) Leprosy can be Cured and Prevented (12) Malaria Eradication—A Symposium of Messages (13) Report of the Indian Delegation to the 12th World Health Assembly (14) Children's Day, 1959 (15) Encephalitis—How to Prevent It (English and Hindi) (16) Lice and their Control (English and Hindi) (17) Your First Visit to Doctor and (18) Medical Education Conference Proceedings.

A folder on Najafgarh Health Unit (Delhi) was also printed by the Bureau.

Two posters *viz.*, "The Handicapped Child must be Helped" and "Prevent Diphtheria and Whooping Cough by Timely Immunisation" were designed, pre-tested, published and distributed.

Art work and lay-out for pamphlets, brochures and posters were also done by the Bureau.

A poster on Family Planning was brought out in connection with the Children's Day. The poster carried the caption. "His Future is in Your Hands; Family Planning Brightens It". Stickers (small posters) entitled "Family Planning Day" were also printed and supplied to the Family Planning Section of the D.G.H.S., New Delhi for distribution on 18th December, 1959.

From January to December, 1959, 47,270 pamphlets were distributed to 3,210 organisations and 15,839 posters were supplied free of cost to 1,571 organisations.

7,326 posters were supplied to 108 organisations on payment as against 2,105 posters supplied to two organisations in 1958.

1,880 (English) and 2,820 (Hindi) folders on "Children's Day" were distributed. Over 170 copies of the poster on "Family Planning" were supplied to 15 local organisations. The Hindi folder 'Encephalitis' was distributed to 573 different organisations in the country.

The Bureau maintains a film library and the films are loaned to various organisations official and non-official concerned with public health and social welfare work in the country. It also provides films, examines technical aspects of film scripts, conducts investigations and evaluates the results of film shows conducted among different sections of population. 20 films and 2 filmstrips were added during the year under report bringing the total number of films to 321 and filmstrips to 109 and 804 films were loaned to 242 organisations.

The Bureau started a new project of conducting film show with a view to finding out the effectiveness of films as media for health education. Some of these were given at Contributory Health Service Scheme's Dispensaries to evaluate the films entitled "Planned Parenthood" and "Child Care and Feeding". People in the area were interviewed and their views on the films were collected. During August to December, 1959; 68 filmshows were conducted in Delhi and New Delhi areas.

The Bureau previewed 29 films and 18 filmstrips received from various Organisations. Two films "Trachoma" and "Protection of Children from Communicable Diseases" sponsored by the Ministry of Health were produced by the Films Division of the Ministry of Information and Broadcasting Government of India, New Delhi.

The films *viz.*, (1) National Malaria Eradication Programme (2) Filariasis (3) Health Education (4) Smallpox (5) Cholera and (6) Family Planning were under production.

The Photograph Section of the Bureau takes pictures on health topics and catalogues them. Besides, photographs are also being collected and catalogued. Additional equipments for photographic work like enlarger, copying equipment etc., were received.

The Health Education Library, started over two years ago, has made quite a good progress. Over 1,450 books, pamphlets, reports and folders were added to the library during the year under report bringing the total number of books etc. to 2,176.

Discussions, Conferences and Technical Assistance

The Bureau participated in the meeting held by the Indian Council of Medical Research in connection with Smallpox Eradication Campaign. It took part in the technical discussions on preventive and social medicine held during the Silver Jubilee Celebrations of the Medical Council of India. The health education material was displayed during the celebrations. Informal discussions were held with the Officers of the UNICEF to work out the details of UNICEF assistance in the shape of equipment, books etc., to the State Health Education Bureaux. The Agency had agreed to give assistance to six States during the year under review.

Family Planning

Discussions were held with the Director (Family Planning), Health Consultant of the Ford Foundation and representatives of the International Population Council to plan a Family Planning Education Programme for the Third Five Year Plan period.

The Bureau participated in the discussions at the Orientation Training Centre at Najafgarh (Delhi) on health education plan drawn up by the Centre for a research project on family planning. The research project is being financed by the Indian Council of Medical Research, New Delhi.

Meetings were held with representatives of the Ford Foundation and International Population Council to draft the educational phase of the Family Planning Programme during the Third Five Year Plan period. The details of the plan were worked out and sent to the Committee of the Central Family Planning Board for inclusion in the Third Five Year Plan Programme.

The Bureau participated in the training programme of Medical Officers in-Charge of Family Planning Clinics at the Contributory Health Service Schemes Dispensaries and gave talks on health education aspects of the Family Planning.

School Health Education

The Bureau participated in the Workshop-*cum*-Refresher Course for The Principals of the Teacher Training Colleges held at the National Institute of Fundamental Education. Besides giving lectures on health education in schools, the Bureau displayed and distributed health education material at the Institute.

The Assistant Director General of Health Services (Health Education) attended the meeting of the Inter-University Board at Chandigarh in February and explained the needs for including health education in Teacher Training Institutions. The Board agreed to draw the attention of the Universities for including health education in the B.Ed. and B.T. Courses offered by them.

The Bureau collaborated with the Extension Division of the Central Institute of Education, Delhi in conducting a two-day seminar for teachers of secondary schools on "School Health Practices". Panel discussions and group discussions, display and distribution of health education material and film shows formed part of the seminar. Background material on the topics discussed were prepared by the Bureau.

Formation of State Health Education Bureaux

The Assistant Director General of Health Services (Health Education) and the School Health Education Adviser of the W.H.O. visited Madras and Bombay States during September, 1959. The main object of the visits was to assist the State Governments in establishing Health Education Bureaux and to clarify some of the technical points of the Central Scheme.

Ways and means of the Bureau's cooperation with the audio-visual unit of the US TCM in its various activities, especially in the production of material and training of personnel, were discussed with the Officers of the TCM.

The Bureau participated as observer at the "Sixth International Conference on Planned Parenthood". The leader of the group on "Motivation and Methods" was given technical assistance. Besides, the Bureau actively participated in discussions and sample educational material was demonstrated.

Technical assistance was given to the Special Leprosy Officer, Bombay with regard to the All India Conference of Leprosy Workers held during the year under report. A feature article on "Health Education in Leprosy" was prepared. A script for a film on Leprosy was edited and also one for a folder. Technical assistance was given to organise an exhibition.

Assistance was given to the All India Institute of Physical Medicine and Rehabilitation in putting up a photographic exhibition in connection with the Regional Orthopaedic Conference held at New Delhi.

The "India-1958 Exhibition" concluded in January, 1959. The President of India visited the Health Pavilion on 2nd January, 1959. He evinced keen interest in all the sections of the pavilion and expressed appreciation about certain exhibits and the method of informing the people about the achievements of the Health Ministry.

The Bureau participated in the "World Health Day". It produced a special number of Swasth Hind which carried a number of articles on the theme of the day—"Mental illness and Mental Health in the World of Today."

A special number of Swasth Hind and a folder were brought out in connection with "Children's Day." The folder laid emphasis on the theme of the Day—"The Mal-adjusted Child must be Re-educated and the Orphan and the Waif must be Sheltered and Succoured." Swasth Hind carried articles on the theme as well as on the care of the children.

Over 59,000 people visited the health pavilion during the period of exhibition and about 900 people registered their names for the supply of health education material. The film shows at the pavilion were very popular.

Training

The W.H.O. trainees from Burma, who had completed their training in health education at the American University, Beirut, visited the Bureau. They had discussed on the organisation and the various activities of the Bureau. A visit to the Najafgarh Health Unit, Delhi was arranged for them as part of their training.

The Bureau conducted panel discussions, lectures, demonstrations in health education for health visitors, family planning workers, under-graduate nurses, teachers, students of the Venereal Diseases Training Centre etc.

A Three-day Training course on "Health Education in Venereal Diseases Control Programme" was conducted at the Venereal Diseases Training Centre, Safdarjang Hospital, New Delhi. The trainees for this course were from different States in the country.

CHAPTER IV

MEDICAL RELIEF

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(i) Hospitals and Dispensaries

The Health Survey and Development Committee in its report, published in 1946, have stated that the number of medical institutions available in every province is far too small to provide a reasonable standard of medical service to the people; particularly in rural areas. Ever since the attainment of independence, the country has made a rapid progress in providing medical and public health services. There has been a steady increase in the number of hospitals and dispensaries particularly in Government Institutions. Besides the construction of new hospitals, new wards were added to many of the existing hospitals in different States. To provide better and more curative and preventive services at the periphery in each district a net work of Primary Health Centres has since been started in the country.

In order to decentralise the medical relief services, so as to bring these services as close to people as possible, 1,399 Primary Health Centres were established in various States of the country upto the end of 31-3-1959. Expanded medical care facilities were provided by way of converting a number of dispensaries into Primary Health Centres.

A Contributory Health Service Scheme for the Central Government employees and their families at Delhi has been functioning successfully since 1954 and is on the verge of expansion. Besides, the Employees' State Insurance Scheme provide medical and other benefits to industrial employees and their families and has been steadily expanding and becoming popular. The Employees' State Insurance Scheme covers factory workers on insurance basis. In addition to allopathic trained doctors, registered Ayurvedic Practitioners are also rendering medical relief to the people in the country particularly in rural areas. It was estimated by the Udupa Committee that there is roughly one Practitioner of Indigenous Systems of Medicine for every 2,500 persons in the country.

Detailed statistics of medical relief with number of hospitals and dispensaries, number of beds in various States/Union Territories during the year 1959 is presented in Table No. 43. A brief account of the important medical relief measures carried out in different States is as given below:—

Andhra Pradesh: There were 9 Government hospitals and 6 dispensaries functioning in Nellore district with a bed capacity of 343. Besides, there were 13 allopathic dispensaries and one hospital at Buchireddipalem with 32 beds under the control of Zila Parishad, Nellore. Four Taluk dispensaries of Rapur, Kovur, Podili and Darsi, which were under the management of local fund authorities, were provincialised. The District Headquarters Hospital, Khamam and Taluk Headquarters Hospital, Burgomphad were up-graded during the year 1959 and bed strength was increased from 36 to 60 and 6 to 10 respectively. In Mahabubnagar district

18 allopathic hospitals and dispensaries were functining of which the Kollapur Hospital and Makthal Hospital were up-graded and the equipment and the staff position of the institution were satisfactory.

Assam : Necessary medical relief was rendered by all the existing hospitals and dispensaries in the State. Some missionary organisations also provided medical relief as and when necessity arose. Excluding those of Lakhimpur district, there were 57 hospitals and 535 dispensaries functioning in the State providing 2,400 beds for indoor treatment. Necessary preventive and precautionary measures were under taken to check the smallpox and cholera epidemics.

The supply position of equipment etc., to the medical institutions was satisfactory throughout the year under report. Some Ayurvedic subsidised dispensaries continued functioning although Homoeopathic and Unani Systems of Medicine were not under the Health Department.

Bihar : Hospitals and dispensaries were functioning satisfactorily throughout the State. During the year under review, 22 new dispensaries were sanctioned to be opened in the backward areas in the districts of Patna, Shahabad, Saran, Muzaffarpur, Darbhanga, Bhagalpur, Monghyr, Santhal Parganas, Ranchi, Hazaribagh, Palamau and Singhbhum.

Bombay : With a view to increase the medical facilities in rural areas, the Govenment sanctioned a scheme for starting Rural Medical Relief Centres (in Panchayat and non-Panchayat villages) where medicine boxes containing standard medicines for common ailments of rural population are kept and medicine is given to patients on payment of nominal charges. The Rural Medical Relief Centres (5 in Panchayat and 5 in non-Panchayat villages) were allotted to each district. However, under Rural Medical Relief Scheme, the State Government sanctioned 491 subsidised medical practitioners centres.

The Government sanctioned 37 sub-dispensaries in scheduled and backward areas. The scheme envisaged distribution of simple medicines through the trained social workers. No charge was made for supply of medicines to the patients.

There was a mobile eye unit attached to the Medical College, Nagpur, visiting different villages to render ophthalmic treatment in remote rural areas and 1,234 cases were examined and treated.

Jammu and Kashmir : The bed strength of the Central Hospitals was raised during 1959. Srinagar and Jammu Hospitals were equipped with modern equipments at cost of Rs. 2 lakhs and Rs. 1·20 lakhs respectively. Arrangements for providing hot water during winter months and cold water during summer months were made in the Central Hospitals.

Kerala : The hospitals were converted into Secondary Health Centres. 7 Primary Health Centres were opened, 4 by converting the existing dispensaries and 3 by establishing new ones. During the year under review, the department was able to start 3 new T.B. clinics, 2 attached to District Hospitals and one to Secondary Health Centre. Six more T.B. clinics were under construction. Construction of leprosy clinic was completed during the year under report. 31 Maternity Child Health Centres and 20 Family Planning Centres were opened. The number of beds in Government institutions functioning during 1959 was 11,799 where 4,78,149 in patients were

treated. The number of out-patients received medical relief was 1,01,47,718 in Government institutions. Besides, there were 1,011 beds available in the aided hospitals.

Madras : With the implementation of the development schemes, there had been a progressive expansion of medical relief in the State of Madras. Of the total number of 871 medical institutions functioning in the State, 817 were general hospitals and dispensaries, 34 institutions were for women and 20 were specialised institutions such as Tuberculosis, Leprosy, Ophthalmic, Mental and Infectious Diseases Hospitals, Santoria and Dispensaries. There were 21,211 beds available during 1959 and the total number of doctors and nurses employed were 1,942 and 2,392 respectively.

Madhya Pradesh : All the hospitals and dispensaries had adequate equipments and medicines. Almost all the hospitals and dispensaries of the State were enrolled as regular indentor from the Government Medical Stores Depot, Bombay. They got their supplies of medicines by sending annual indent to the Government Medical Stores Depot, Bombay.

Primary Health Centre, having been established at Nanipur in Mandla district, the subsidised dispensary was abolished during the year under report. In the State of Madhya Pradesh some of the hospitals and dispensaries were run by the local bodies such as Municipalities and Janapad Sabhas with grant-in-aid and assistance of services of Medical Officers from the State Government and 21 dispensaries were provincialised during 1959.

Mysore : During the year under report, 895 medical institutions were functioning. Out of these, there were 178 hospitals, 707 dispensaries and 10 mobile units. The average population served by each medical institution was 21,922. The Government sanctioned supply of ambulance vanes to the six hospitals during the year under review. As usual, all the medical institutions were supplied with adequate medicines and equipment required. Major equipments like operation tables, anaesthesia apparatus etc., worth Rs. 11 lakhs were purchased for use in the hospitals of this State during the year 1959.

Orissa : All the District Headquarters Hospitals, including the S.C.B. Medical College Hospital, were provided with ambulance services. 41 Primary Health Centres had ambulance jeeps of which 12 provided by the Government and 29 by the UNICEF. Facilities for X-ray examination were available at all District Headquarters Hospitals, S.C.B. Medical College Hospital, Cuttack, Capital Hospital Bhubneswar, S.C.B. Medical College (Extension Burla), Moorsheat Memorial Hospital, G. Udayagiri T.B. Hospital at Chandpur and Uditnarayanpur. Radium therapy and deep X-ray therapy were available at the S.C.B. Medical College Hospital, Cuttack for treatment of Cancer.

Punjab : 312 hospitals and 498 dispensaries were rendering medical relief to the patients. There were also 145 Primary Health Centres functioning during the year review. As far as funds permitted, improvements were effected in these institutions by providing additional equipments and staff etc. The budget allotment of Rs. 1,58,65,860 was sanctioned for the maintenance and running of these hospitals and dispensaries for the year 1959-60. The Badshah Khan Hospital at Faridabad, District Gurgaon, which was previously maintained by the Faridabad Development Board on a cent per cent grant from the Government of India, in the Ministry of

Rehabilitation was taken over by the Punjab Government during 1959. Five dispensaries were opened by the District Boards from their own funds during the year under review.

According to "Key Village Scheme" the village located within five miles radius of the dispensary were visited on fixed day twice a week by the Medical Officer-in-Charge of the dispensaries. Besides attending the needs of the villagers, the Medical Officer also inspected the sanitation and vaccination work of the villages within their jurisdiction. Health education was also imparted by the Medical Officer concerned. The number of rural/civil dispensaries participating in the "Key Village Scheme" was 175.

Rajasthan: There were 258 hospitals, 207 dispensaries and 9 T.B. clinics as on 31st December, 1959 as against 256 hospitals and 200 dispensaries in 1958 which referred to State Public Institutions only. Four Government hospitals and one dispensary were converted into Primary Health Centres during the year under review. The Mental Hospital, Udaipur was closed.

The comparative position of patients treated in State Public Hospitals, Dispensaries, Primary Health Centres, State Special Institutions and Private Institutions was on increase during the year under review. All the district hospitals/dispensaries were fairly adequate to meet with the needs of the patients.

Uttar Pradesh: Despite unsatisfactory state of finance hospitals and dispensaries of this State continued to render valuable services on scientific lines. The budgetary position as a whole for the year 1959-60 was Rs. 4,79,17,600. The expansion of medical facilities throughout the State specially in the rural areas and in small towns was followed. In order to provide more medical facilities to rural areas, subsidised dispensaries had functioned, for which subsidy was given by the State Government. The total amount of subsidy given during 1959-60 to subsidised medical practioners' unit of Allopathic System of Medicine was Rs. 1,04,676.

The total number of State Public Hospitals and Dispensaries increased from 146 in 1947 to 668 in 1959 including 137 units for women. The number of medical institutions of various categories at the end of the years 1958 and 1959 are given below:—

Medical Institutions	Years	
	1958	1959
1. State Public	631	668
2. State Special	162	172
3. Medical and Municipal Boards	326	326
4. Private aided	53	56
5. Private non-aided	24	26
6. Subsidised	82	80
TOTAL	1,278	1,328

Besides, there was a network of State Ayurvedic, Unani and Homoeopathic Dispensaries all over the State, which were 624 in number.

West Bengal: 30 relief camp hospitals and dispensaries with 483 beds functioned in this State. 622 T.B. beds were maintained for displaced T.B. patients in different hospitals of West Bengal.

4 Mobile T.B. Units also functioned during the year 1959 for the treatment of displaced T.B. patients. Construction of 1,000 bedded T.B. hospital at Dhubulia, District Nadia was completed and 250 beds were initially opened.

There is no system in the State for payment of subsidy to any medical practitioner. But a scheme for the purpose had been under contemplation of the State Health Directorate.

The equipments required by different institutions were supplied as far as possible from the local market. Steps were also taken to supply the special equipments by importing them from abroad.

The schemes for provincialisation of the public health services run by the District Boards in rural areas of the State were implemented during the year under report. The Government relieved the District Boards and assumed the charge of public health duties, excepting those relating to water supply in districts, and also of the public health laboratories of the District Boards. 279 Hospitals and 1,789 Dispensaries, including Primary Health Centres, Mobile Units and Clinics etc., with 26,749 beds were functioning in this State during the year 1959.

Andaman and Nicobar Islands: Sufficient number of hospitals and dispensaries existed in different parts of the Islands to extend medical facilities to one and all. The hospitals were under the charge of the Medical Officers and Dispensaries under Compounders or Male Nurses except the one hospital at Long Island, which was under the charge of a Head Compounder due to the shortage of doctors. One mobile dispensary and one floating dispensary were in commission to provide medical relief to the people of South Andaman and the scattered Islands of the Nicobar group respectively. The supply position of medicines and equipment etc., received from Medical Stores Depots, Calcutta, was satisfactory.

Delhi: A ward of 12 beds was opened in the police barracks adjacent to the Police Hospital to house indoor patients. The Police Hospital was also catering to the needs of the Central Reserved Police Force. Medical examination of opium addicts and of civil recruits were also undertaken during the year under report.

Himachal Pradesh: The Medical and Public Health Services in Himachal Pradesh is a well coordinated programme from the very inception of this Pradesh. Adequate supplies of equipment and medicines etc., were arranged for all the institutions. The Beldar Mobile Dispensaries and Motor Mobile Dispensaries (both Allopathic and Ayurvedic) were doing very useful medical relief work in the interior of the Pradesh at the door of the patients.

Laccadive Islands: This is a small Union Territory consisting of a group of Islands with a population of about 24,000. During 1959, seven Government dispensaries were functioning in this Union Territory, one each in the seven major Islands.

Manipur: The hospitals and dispensaries were catering to the needs of the ailing people of the territory and the general progress in medical relief work was satisfactory.

Tripura: All the medical institutions of Tripura Territorial Council were situated scatteredly in different places of the territory. Medical stores worth Rs. 2 lakhs were purchased and supplied to the Hospitals, Primary Health Centres and Dispensaries. With a view to get qualified personnel, the Council arranged training in Diploma in Clinical Pathology (2 persons), D.M.R.E. (Radiology) (2 persons), Lady Health Visitors (9 persons) and Senior Nursing (1 person).

(ii) Contributory Health Service Scheme

The Contributory Health Service Scheme continued to make rapid progress in its fifth year of life. It was introduced in 1954 on an experimental measure with the object of providing better medical facilities for all categories of Central Government employees and members of their families. The Scheme was placed on a permanent footing in 1957. In the year under review, the proposals regarding its reorganization and expansion with a view to further improving the efficiency of the services rendered by the scheme and ensuring smooth working of the dispensaries were implemented and as many as eight static dispensaries and one mobile dispensary were added during the year under report, bringing the total number of static and mobile dispensaries to 34 and 4 respectively.

Review of work done

The number of patients treated at the various dispensaries rose to 40,75,479 as against 37,14,981 during the previous year. The month-wise break-up of the daily average attendance of the patients at various Contributory Health Service Scheme's dispensaries during 1959 is shown in Table No. 44. The increase was mainly due to the fact that with an overall improvement in the services provided by the Scheme, greater number of people took advantage of the facilities provided under the Scheme. The increase in the population served by the Contributory Health Service Scheme, which rose from 4,27,500 to 4,56,000 was on account of inclusion of industrial and non-industrial civilian employees of the Ministry of Defence and Members of Parliament and which also contributed towards increase in number of patients treated at the Contributory Health Service Scheme's dispensaries. The following table gives an indication of the all round progress made by the Scheme since its inception:—

	Years					
Categories	1954	1955	1956	1957	1958	1959
1. No. of beneficiaries covered.	2,23,000	2,73,000	3,20,128	4,04,800	4,27,000	4,56,000

Categories	Years					
	1954	1955	1956	1957	1958	1959
2. No. of dispensaries (Static)	16	18	19	21	26	34
3. No. of dispensaries (Mobile)	..	3	3	3	3	4
4. Total attendance .	737,572	2,314,678	2,962,265	3,250,930	3,714,981	4,075,479
5. No. of Medical Officers (Specialists)	11	20	20	20	30	33

The month-wise incidence of the various important diseases recorded in the various Contributory Health Service Scheme's dispensaries during the year under report is shown in Table No. 45.

The figures of expenditure and contribution received for the years 1956-60 were as follows :—

Categories	Years			
	1956-57	1957-58	1958-59	1959-60
Expenditure	35,44,967	40,74,468	50,20,855	72,61,500
Receipts	20,90,119	23,46,444	25,93,000	31,54,000

The eight new static dispensaries were opened at the following areas :—

1. President's Estate
2. Daryaganj
3. Moti Bagh II
4. Nauroji Nagar
5. Constitution House
6. South Avenue
7. North Avenue
8. Telegraph Lane.

Health check-up clinic :

Besides the new dispensaries, a Health Check-up Clinic was also set up in the Central Secretariat Dispensary in August, 1959 with the object of providing facilities for detection at an early stage of any abnormalities in the physical system with a view to applying necessary corrective in good time. Judging from the number of applications received (2,416) it is evident that the clinic is amply fulfilling its objective. In view of the large number of Government servants wishing to avail of the facilities provided by the clinic, the set up of the clinic was strengthened.

Formation of Dentists and Opticians Panels :

The supply of free artificial, optical and dental aids is not provided under the Contributory Health Service Scheme. However, for the convenience of the Contributory Health Service Scheme beneficiaries, a panel for Opticians and Dentists was approved by the Government for supplying frames and glasses and dentures to the Contributory Health Service Scheme patients at reasonable scheduled rates.

Expansion of the Scheme to Industrial/Non-industrial Employees of the Ministry of Defence and Members of Parliament and Semi-Government Bodies :

Since its inception there has been a very pressing and incessant demand for the extension of the scope of the Scheme so as to include the staff of some Semi-Government Organisations and statutory bodies. The demand was, however, being resisted to ensure that the services provided under the Scheme were sufficiently well established and suitably augmented before any further pressure was placed on them. However, on the very pressing request from the Ministry of Defence, it was decided to extend the Scheme to the industrial and non-industrial civilian employees of the Defence Ministry with effect from 1st December, 1959. The total number of such employees was about 4,500-5,000.

The question of providing medical facilities to Members of Parliament was under the active consideration of the Government for some time past. A number of proposals were considered for the purpose. It was, however, finally decided that facilities as admissible to Class I Officers under the Contributory Health Service Scheme should be made available to the Members of Parliament, who would be required to pay contribution of Rs. 2.50 p. The Scheme was extended to the Members of Parliament with effect from 16-11-1959. Three new dispensaries in North Avenue, South Avenue and Constitution House were opened to cater mainly to the needs of the Members of Parliament though Government servants living in these areas are also entitled to receive treatment at these dispensaries.

It was also decided to admit a number of semi-Government Organisations and autonomous corporations having a limited strength of employees.

Accommodation for Dispensaries :

Securing suitable accommodation for the dispensaries was one of the major hurdles in the way of opening new dispensaries. Lack of sufficient accommodation in some of the dispensaries was responsible for the difficulties experienced by the people in the general working of the dispensaries. However, possible steps were taken to secure more spacious accommodation for the dispensaries. With the same end in view the dispensaries functioning in Willingdon and Safdarjang Hospitals were shifted to Gole Market and Kidwai Nagar respectively. The accommodation thus released was utilised to improve the working of the Contributory Health Service Scheme Specialists' Departments functioning in these Hospitals.

The Contributory Health Service Scheme having been placed on a permanent footing in 1957, steps were also taken to construct buildings specially designed to suit the requirements of a dispensary. The Chandna Chowk and Lajpat Nagar areas were accorded priority for the construction of dispensary buildings. Similarly Moti Bagh was also one of the areas where the construction of a dispensary building was considered on a priority basis.

Changes in the provision of the Contributory Health Service Scheme :

So far the Scheme did not include any provision for treatment of mental cases. Under the revised orders of the Government of India, a period of six months was allowed for which a Government servant can receive treatment at a recognised Mental Hospital nearest to the place where he falls ill. This period can be extended to a further period of six months, if there are reasonable prospects of recovery.

The position with regard to the applicability of the Contributory Health Service Scheme to Government servants and their families, whose headquarters were outside Delhi/New Delhi, during their casual visit and temporary stay in Delhi, was not quite clear and well defined. Though the position was sought to be regulated by ad-hoc Government orders, some confusion and difficulties continued to exist. To clarify the position it was decided that Government servants, whose headquarters are outside Delhi, while visiting Delhi on leave or on duty, continue to be governed by the set of medical attendance rules applicable to them at their headquarters.

New Identity Cards

With a view to preventing the abuse of facilities of medical treatment available under the Contributory Health Service Scheme by misuse of token cards or impersonation, it was decided to introduce new identity cards. The new identity cards have accordingly been issued by the Administrative Officers of the Government servants concerned.

The Contributory Heath Service Scheme continued to extend cooperation and lend its services to other Ministries in providing medical facilities to the delegates of the various International Conferences, Seminars, etc., held in the capital from time to time. This work, although outside the purview of the Contributory Health Service Scheme, is undertaken to meet the requests of the Ministries organising such conferences.

Working of the Family Planning Centres :

Nine Family Planning Centres were opened under the Scheme to propagate and popularise the idea of family planning among the Government servants and their families and to advise them on the suitable method of birth control showed improvement in their working during the year under report. A larger attendance at the clinics and keener response to the idea of family planning from the population served by the Contributory Health Service Scheme was in evidence at these clinics. The subsidised sale of contraceptives at these centres also shown an upward trend. As in previous years, "Children's Day" was observed in some of the centres on 14-11-1959 with marked success when "Health Exhibitions," "Baby Shows" and other similar functions were organised. The "Family Planning Day" was also celebrated on 18-12-1959 to educate the public regarding the family planning programme. A statement showing the progress and nature of work done at Family Planning Centres is shown in Table No. 46.

To create better understanding and win the confidence of the community, some social welfare activities like adult education and tailoring and knitting classes were started in some of the centres in collaboration with the welfare organisation of the Ministry of Home Affairs, Government of India, New Delhi.

The opening of an additional Family Planning Centre in Tilak Nagar area also received active consideration.

(iii) Blood Transfusion Services

Blood Transfusion Services showed continued progress during the year under report. Table No. 47 indicates the State-wise distribution of blood banks and the activities thereof during the year 1959. The detailed information regarding the various activities on the Blood Transfusion Services in the various States and Union Territories of the country is given below:—

Andhra Pradesh: During the year under report, 19 blood banks were functioning in this State. In all 11,721 persons donated 43,94,425 c.c. of blood and 13,194 blood transfusions were made.

Bihar: Previously there were only two blood banks functioning in this State attached to Patna Medical College Hospital, Patna and Darbhanga Medical College Hospital, Laheriasarai. In the year 1959, all Sadar Hospitals of this State were provided with a blood transfusion unit. In all five blood banks existed during the year under report, 1,873 persons donated 550.150 c.c. of blood and 1,697 blood transfusions were made. The total quantity of plasma/serum produced was 10,105 c.c.

Bombay: In all 13,912 persons donated 5,199.615 c.c. of blood and 14,069 blood transfusions were made during the year under report. The total quantity of serum/plasma produced was 4,600 c.c. The activities of some of the institutions relating to blood collection and transfusions are described below:—

1. *J. J. Group of Hospitals, Bombay:* There was a full fledged blood bank at this hospital. Blood was given on payment of Rs. 12 per transfusion and the deserving poor patients were supplied blood from the "Poor Fund". 2,750 persons donated 688,050 c.c. of blood and 2,152 blood transfusions were made.

2. *Coma and Albless Hospital, Bombay:* Blood transfusion facilities were available at this hospital. For the supply of blood, this hospital has to depend upon St. George's Hospital, Bombay.

3. *Civil Hospital, Dhulia:* No regular Blood Bank existed at this hospital during the period under report. Annually about 607 blood transfusions were made with the cooperation of the Jail Department.

4. *Sasson Hospital, Poona:* A well equipped blood bank existed at this hospital and remained open for 24 hours and met the needs of other medical institutions in the rural and urban areas.

5. *Sholapur District*: Facilities for blood transfusion existed at all the hospitals in Sholapur district. There was no blood bank at the Civil Hospital, Sholapur but blood was purchased from Gopabai B. Damani Blood Bank run by the Indian Red Cross Society. At N.M. Wadia Charitable Hospital, which is a grant-in-aid institution, blood bank was run by the said hospital.

6. *Daga Memorial Hospital, Nagpur :* Regular blood transfusion services existed at this hospital during the year under report. In all blood was collected from 1,326 donors and 1,285 blood transfusions were made.

Jammu and Kashmir : Two blood banks existed in this State during the year under report. The quantity of blood collected was 116,000 c.c. from 274 donors. In all 278 blood transfusions were made.

Kerala : Blood was donated by 2,670 persons. The total quantity of blood collected was 623,400 c.c. during the year under report.

Madras : 22 blood banks existed in the State. In all 21,771 persons donated 5.383,649 c.c. of blood and 18,350 blood transfusions were made. Total quantity of plasma/serum prepared was 1,023,950 c.c. The activities of the Government General Hospital, Madras were as follows:—

During the year 1959, there was further progress in the working of the blood bank as compared with all the previous years and there were 5,824 blood donors of whom 5,094 were paid donors and 730 were voluntary unpaid donors. A total number of 4,526 transfusions were given in this hospital of which 4,032 were blood transfusions and 494 were plasma and serum transfusions. Though a large number of transfusions were given during the year under report, the reaction rate consisting mostly of rigors was only 0·5 per cent. Bulk of the blood collected was used for surgical cases and a few for medical cases and in the special departments. The success of the Thorasic Surgery and Neuro-surgical Units owed their success on the availability of a large number of bottles of blood. Good results were observed with small fresh blood transfusions in certain eye diseases like vitreous haemorrahage, etc. In highly anaemic patients either packed cell transfusions or exsanguino transfusions were given with very good results. Nutritional odema cases among children improved very rapidly with small repeated transfusions.

Mysore : In this State three blood banks existed at (1) Victoria Hospital, Banaglore (2) Bowring and Lady Curzon Hospital, Bangalore and (3) Government Wenlock Hospital, Mangalore. Besides, the blood transfusion work was done in some of the medical institutions of this State though there were no scientific blood banks. Arrangements were made for starting an independent blood bank in the K. R. Hospital, Mysore. 2,351 persons donated 940,455 c.c. of blood and 2,527 blood transfusions were made.

Orissa : There were three blood banks in this State to meet the routine and emergent requisition. 1,178 persons donated 295 liters of blood and 1,875 bottles were issued for transfusion. The total number of blood transfusions done was 467,750.

Punjab : Four blood banks existed in this State and 2,620,130 c.c. of blood was collected from 8,110 donors. The total number of blood transfusions made was 7,829. Only one blood bank existed where facilities for the preparation of plasma were available.

Rajasthan : Five blood banks existed in this State and 1,055,470 c.c. of blood was collected from 3,613 donors. The total number of blood transfusions made was 3,344.

Uttar Pradesh : The following blood banks continued to function and made steady progress during the year under report :—

1. Uttar Pradesh Blood Bank, Lucknow.
2. Sarojini Naidu Hospital, Agra.
3. King Edward VII Sanatorium, Bhowli, Nainital District.

The main activities of these banks were as follows :—

1. Grouping and matching of patients and donors blood.
2. Collection of blood from donors.
3. Supply of blood to various districts.

West Bengal : Six blood banks functioned in this State, *viz.*, three in Calcutta and the other three in two districts.

A total number of 13,668 blood transfusions were made during the year 1959. Besides supplying blood, the Calcutta Blood Bank also supplied plasma and packed cells.

The Calcutta Blood Bank produced the Rh testing fluid and Coomle's fluid in 1959 and difficulties due to shortage of fluids were solved. Exchange transfusion i.e. taking out blood from the new born and replacing it with fresh blood was also done during the year under review.

Andaman and Nicobar Islands : No blood bank functioned in this territory during the year 1959. However, blood transfusions were carried out with arrangements in the Pathological Laboratory attached to the Civil Hospital, Port Blair through voluntary donation when it was necessary. During the year under report two blood transfusions were made.

Delhi : 4 blood banks existed in this territory during the year under report. 3,577,100 c.c. of blood was collected from 10,618 donors and 10,631 blood transfusions were made. The total quantity of plasma/sera produced was 5,000 c.c.

Himachal Pradesh : There was only one blood bank in this territory at the Himachal Pradesh Hospital, Simla. This service is to be extended to the district hospitals in the Third Five Year Plan period. 18,830 c.c. of blood was collected from 70 donors and 58 transfusions were carried out.

Manipur : There was one blood bank in this territory and 8,000 c.c. of blood was collected from 1,200 donors.

Pondicherry : No activities were carried out in relation to blood transfusion during the year under report.

Tripura : No specialised services on blood transfusion were in existence during the year 1959 so far as the Tripura Territorial Council is concerned.

(iv) X-Ray, Radium Therapy and Isotopes Treatment

X-ray facilities for diagnostic and therapeutic purposes continued to be far from adequate during the year under report. Facilities for radium

treatment also remained inadequate. The State-wise distribution of number of institutions having X-ray facilities, number of cases examined and number of cases treated during the year 1959, is shown in Table No. 48. The State-wise distribution of institutions, wherein radium facilities and the quantity of radium available etc., is shown in Table No. 49.

The activities carried out by the various States in respect of X-ray, Radium Therapy and Isotopes Treatment during the year under report are summarised below :—

Andhra Pradesh : Twenty one medical institutions were provided with X-ray facilities. Twenty five major and twenty nine minor sets were available for diagnostic purposes and four superficial and four deep sets functioned for therapeutic purposes. 1,45,104 cases were examined and 10,676 cases were treated.

Radium facilities existed at two institutions and the quantity of radium available was 788 mg. 763 patients were treated during the year under report.

Radio isotopes facilities were available in one institution. During the year under report, 1,299 cases were diagnosed and 1,186 cases were treated.

Bihar : X-ray facilities were available in 36 medical institutions during the year 1959. There were 124 major and 43 minor sets for diagnostic and 5 superficial and four deep sets for therapeutic purposes available in this State. 57,924 cases were examined and 1,16,080 cases treated.

Radium facilities existed in one medical institution. Twenty cases were diagnosed and treated with the help of the radio isotopes.

Bombay : During the year under report, X-ray facilities existed at 82 medical institutions. There were major and minor sets available for diagnostic purposes. For therapeutic purposes, superficial and deep sets were also available. The number of cases examined were 4,39,015 and the number of cases treated were 1,55,168.

Radium facilities existed in seven medical institutions. The quantity of radium available was 835 mg. Radium treatment was given to 770 patients. During the year 1959, radium facilities were started in one institution.

Mysore : There were 37 medical institutions in this State, where X-ray facilities were available for the treatment of both in-door and out-door patients. There were about 27 major and 41 minor, 5 superficial and 8 deep X-ray plants in the above medical institutions. In all 2,63,782 cases were examined and 1,14,518 cases were treated.

From July, 1959, a course for training of radiographers was started with five candidates. There were only two institutions offering this course of study in this State.

There were only four medical institutions in the entire State of Mysore, where facilities for radium treatment existed.

The names of such medical institutions together with the details of quantity of radium available and number of patients treated, are shown below :—

Institutions	Quantity of radium available (in mg.)	No. of patients treated
1. Victoria Hospital, Bangalore	500	35
2. Headquarters Hospital, Mangalore	250	190
3. Bowring and Lady Curzon Hospital, Bangalore . . .	123·13	560
4. K. R. Hospital, Mysore.	140	44

Orissa : X-ray facilities were available in 20 hospitals of this State. During the year under review, 23,572 cases were examined and 735 cases were treated.

Facilities for radium treatment were available only at the S.C.B. Medical College Hospital, Cuttack.

Punjab : Facilities for X-ray treatment and diagnosis were available at 58 medical institutions during the year under report as compared with 54 institutions in 1958. There were 25 major and 62 minor sets for diagnostic and 7 superficial and 5 deep for therapeutic purposes available in this State. 1,21,120 patients were diagnosed and 29,871 were treated.

Radium facilities existed at three medical institutions. The total quantity of radium available was 300 mg. The number of patients given radium treatment was 260. Radio isotopes treatment facility was available at one institution. 80 cases were diagnosed and treated during the year under report.

Rajasthan : X-ray facilities were available in all the bigger Government hospitals. A total of 27 major and 41 minor sets for diagnostic and 9 superficial and 5 deep sets for therapeutic purposes were available. 1,52,346 cases were examined and 11,481 cases were treated.

Radium treatment facilities were available at Ganga X-ray and Radium Institute, Bikaner wherein 140 mg. of radium was available. In all 36 cases were treated during the year under report.

Uttar Pradesh : X-ray facilities were available in 90 medical institutions of this State.

A total of 59 major and 72 minor sets for diagnostic and 6 superficial and 7 deep for therapeutic purposes were available. In all 2,45,219 cases were examined and 2,22,823 cases were treated during the year 1959.

Two institutions imparted radium treatment to patients during the year 1959. The total quantity of radium available was 400 mg. and 2018 patients were treated.

West Bengal: X-ray facilities were available at 36 medical institutions. No new institution was provided with X-ray facilities during the year under report. A total of 33 major and 60 minor sets for diagnostic and 16 sets for therapeutic purposes were available. The number of cases examined was 1,85,296 and the number of cases treated was 26,405 during the year under review.

* * * *

Andaman and Nicobar Islands: One X-ray Section attached to the Civil Hospital, Port Blair functioned during the year under report. Two minor X-ray sets were available in this hospital. No recognised Radiologist was employed in the above hospital. The work was carried out by the Medical Officer in-Charge. The supply of films to this X-ray Section was satisfactory. During the year under report 453 patients were X-rayed.

Facilities for radium therapy and isotopes treatment were not available in this territory and patients needing radium treatment were sent to mainland (mostly to Calcutta or Madras), where such facilities are available.

Himachal Pradesh: X-ray facilities were available in all the district hospitals and some other civil hospitals and specialised institutions like T.B. Sanatorium, Mandodhar for diagnostic and treatment purposes. There was only one deep X-ray therapy plant at the Himachal Pradesh Hospital, Simla, which could not be utilised for want of certain parts.

Facilities for radium therapy were also available at Himchal Pradesh Hospital, Simla. There was no provision for isotopes treatment in any of the institutions of this Pradesh. Seven institutions with X-ray facilities in this territory were having five major and three minor sets for diagnostic and 5 superficial and one deep sets for therapeutic purposes. The total number of cases examined was 13,046 and the number of cases treated was 718.

(v) Mental Health Services

The Bhore Committee discovered that the existing provision for medical care of mental patients was inadequate and unsatisfactory and recommended the improvement of the existing mental hospitals and establishment of new institutions to provide more facilities for training in mental health for medical and ancillary personnel required to staff in various mental hospitals. In India the ratio of mental patients is not less than 2:1,000 of population. So about a million persons in India require hospitalisation. As against this, the total number of beds available in various Mental Institutions and Psychiatric Clinics attached to general hospitals in the country was 12,795 in 1959.

The All India Institute of Mental Health, Bangalore started functioning in 1955 in association with the Mental Hospital, Bangalore. Its affairs are managed by the governing body consisting of representatives of the Central

Government and the Government of Mysore. The objectives of this institution are:—

(i) to make provision for and to promote post-graduate and special studies and research in mental health;

(ii) to give advice to the Government of India and to State Governments on matters relating to the organisation of mental health services;

(iii) to act in coordination with international and other agencies in the matter of post-graduate and special studies; and

(iv) to plan and conduct research on problems relating to mental health.

The Hospital for Mental Diseases, Ranchi which was previously under a Board of Trustees, was taken over by the Central Government with a view to reorganising it on sound lines and also making it a model centre for treatment of mental disorders. An advisory committee composed of representatives of the Central Government and of contributing States was constituted to advise the Government of India in the management of the hospital. The bed strength of the hospital raised from 420 to 453 during the year under report and their State-wise distribution was as follows:—

States/Administrations	Beds
1. West Bengal	255
2. Bihar	60
3. Uttar Pradesh	35
4. Madhya Pradesh	10
5. Delhi	10
6. Assam	6
7. Orissa	6
8. Punjab	1
9. Tripura	4
10. Other areas	3
11. Independent beds	63
TOTAL	453

The various achievements in the clinical fields are as detailed below:—

(1) *Expansion of Group Therapy Programme.*—At the moment there were as many as 4 Psychotherapeutic Groups which functioned for the benefit of the patients; one for Bengali speaking patients, 2 for Hindi speaking patients and one for English speaking patients.

(2) During the year 1959, the following clinical research projects were launched:—

(a) A psycho-dynamic study of paranoid schizophrenics in the hospital and comparison with the available data from literatures based on Western hospitals;

(b) Clinical trials with various new drugs like Marsalid, Stemetil etc;

(c) Standardisation of more psychological tests for Indian population by Psychology Department;

(d) Study of excretion of phosphates and creatinine in the urine of schizophrenics as compared with normal ; and

(e) Continuation of the study of value of combining insulin with BZ 55 in cases of insulin resistance in coma clinics.

A list of the Mental Hospitals in India together with the number of beds available and the number of mental patients treated during the year 1959 is given in Table No. 50.

The activities with regard to treatment facilities in the various States are summarised as follows :—

Andhra Pradesh : In the Hospital for Mental Diseases, Hyderabad, 350 cases of mental diseases were treated in 1959 as compared with 345 cases in 1958. All the modern methods of treatment were given in the Government Mental Hospital, Waltair during 1959 such as Insulin Coma Therapy, Electric Convulsive Therapy, use of tranquillising drugs such as ergactil, serpasil etc. Types of major illnesses were Schizophrenia, Manic Depressive Reaction Epilepsy, Mental Deficiency, Toxic Psychosis, Organic Psychosis, Neuroses and Cerebral Syphilis (G.P.I.). The patients had facilities for recreation and amusements and were also sent out regularly for recreation to cinemas, excursions, pilgrimages etc., in the hospital van under the supervision of a qualified Psychiatric Nurse. The main items provided as occupational therapy for patients in this hospital were agriculture, gardening, spinning, weaving tailoring and cerpentry etc. There was a Psychiatric Out-patient Clinic and also a Psychiatric Ward at the King George Hospital, Visakhapatnam. There was no facility for training of mentally defective children.

Kerala : There were 3 mental hospitals existing previously continued to function during the year under report. The diseases treated generally in these institutions were Schizophrenia, Acute Psychosis, Epileptic Psychosis, and Recurrent Mania. Now almost all methods of treatments such as insulin coma therapy, electric convulsive therapy, treatment by tranquillisers are carried out. The occupation therapy was also adopted for improving the psychiatric conditions of the patients.

Madras : The Government Mental Hospital, Madras functioned satisfactorily during the year 1959. A total number of 1,825 cases of different types of psychiatric diseases were treated. There were also about 50 mental defective children in the hospital. Each patient on admission was thoroughly investigated, diagnosed and a course of treatment instituted. Treatment with sedation, transquillising drugs, electric convulsive therapy, insulin coma therapy, hormone therapy, psycho therapy and occupational and recreational therapy was given.

There were Psychiatric Out-patient Clinics and Child Guidance Clinics in the Government General Hospitals and Government Stanley Hospital, Madras and counselling was also done at these Clinics.

Madhya Pradesh : The psychiatric facilities available in this State to study and treat the psychiatric cases were neither upto the standard nor sufficient. There were only two Mental Hospitals one at Gwalior and the other at Indore functioning in this State during the year under report. Much of the accommodation in the Mental Hospital, Indore was more or less engaged by chronic patients, who had no relations outside to look after them.

Mysore : There were two major Mental Hospitals in this State, functioning at Bangalore and Dharwar during the year under report.

2,424 patients were admitted to Mental Hospital, Bangalore of whom 1,536 were males and 888 females. Almost all the cases were Psychosis mainly schizophrenic reaction type. There were a few cases of epilepsy, mental deficiency and organic cases. All modern form of treatment like electric convulsive therapy (straight and modified), insulin coma treatment, tranquilliser etc., were employed.

There was also an active psychiatric out-patient department at Mental Hospital, Bangalore. 1,379 new patients (901 males and 478 females) were registered during 1959.

A Child Guidance Clinic functioned for investigation, diagnosis and treatment of children. A total of 159 patients attended the Child Guidance Clinic during the year under review. Many of the children, attending this unit, were mentally defective, epileptic or post-encephalitic. They were tested psychometrically and taking into consideration temperamental and other aspects of their personality and aptitude, guidance was given on matter of education and rehabilitation.

Orissa : No separate institutions existed in this State for treatment of psychiatric patients. However, beds were reserved in the following mental hospitals outside the jurisdiction of this State for treatment of such patients :—

1. Hospitals for Mental Diseases, Ranchi.
2. Ranchi Mansik Arogya Shala, Kanke, Ranchi.
3. Mental Hospital, Waltair, (Andhra Pradesh).

Punjab : The psychiatric services in this State were available at the Punjab Mental Hospital, Amritsar and at the Out-patient Clinic, Psychiatric Department of Medical College Hospitals at Amritsar, Patiala and at the Civil Hospital, Gobindgarh.

The work done at the Punjab Mental Hospital, Amritsar registered a further all-round increase, even though two Psychiatric Out-patient Clinics, were opened at two other hospitals in this State during 1959. 4,492 new patients were given consultation as against 4,260 in 1958 at Out-patient Clinics. A part of the Out-patient Clinic is the Out-patients' Camp, in which 80 to 120 patients stayed in the hospital compound along with their families, in varandah and under the trees to get their wards treated. More than 2,000 patients availed of treatment in this Camp at no cost to the State Government.

Uttar Pradesh : There were three Mental Hospitals in this State with 668 beds at Agra, 331 at Bareilly and 408 at Varanasi. Treatment on modern lines such as convulsive therapy (chemical and electrical) insulin coma treatment, hydrotherapy, psychotherapy, therapy with drugs and tranquillisers etc., continued to be given. The occupational and recreational therapies at these mental hospitals for mental patients, modernised under the guidance of specialised staff, continued to receive increasing attention.

West Bengal : The facilities for treatment of mentally defective patients were available at three special hospitals with 270 beds. Besides, there was also an observation ward with 30 beds at Calcutta. The State Government

also maintained 862 beds at the Mental Hospital, Ranchi and Mental Hospital, Kanke, Ranchi. During 1959, there was one institution *viz.*, "Bodhi Peet" at Calcutta with an accommodation of 65 children for training of mentally defective children. 18 beds for treatment of mental patients were maintained in General Hospitals *viz.*, 4 beds in Medical College Hospital, Calcutta, 2 beds in R. G. Kar Hospital, Calcutta and 12 beds at the Alipur Central Jail Hospital, Calcutta.

Andaman and Nicobar Islands : No mental hospital was in existence in this territory during the year 1959. Persons suffering from mental derangement were detained in the Mental Observation Ward at the District Jail. 15 persons were admitted to this Ward and 13 persons were released as they showed improvement in their mental conditions. One patient was transferred to Madras for further treatment in Mental Asylum in the mainland.

Himachal Pradesh : There were no special or separate arrangements for the treatment of mental cases in this Administration. However, the cases referred by the Medical Officers of various hospitals and dispensaries, requiring special treatment, were sent to Mental Hospitals at Amritsar, Bareilly, Ranchi and Varanasi etc., where certain number of seats were reserved for mental patients of this Administration. This was done after a very careful examination and merits of such cases.

CHAPTER V

FAMILY PLANNING

(104-109)

CHAPTER V

FAMILY PLANNING

The Committee of the Working Group on Vital and Health Statistics of the Planning Commission has estimated that 1961 census population figures will exceed 430 millions and by 1966 the population of the Indian Union will reach the size of 480 millions. During 1961-66, the population may increase annually by 10 millions with an overall growth rate of 2·1 per cent. It may, therefore, be assumed that the general fertility rate of 0·189 (*viz.*, average number of births per female aged 15-44 years during one year) consistent with birth rate of 42 per thousand of population around 1951 would remain unchanged during 1951-66, the mortality rate will diminish and the expectation of life at birth would steadily increase from about 32 years in 1951 to 50 years in 1966. With the extension of health services the death rates have been reduced and will be further reduced. This will lead to continuance of increase of such growth rates and size of population which would add to difficulties in improving the level of living of people. In order to ensure health and happiness of the families and to improve their level of living, it is necessary that intensive efforts should be made to increase our resources but concurrently vigorous efforts should be made to reduce the rate of growth of population. The population problem, therefore, continues to engage the attention of the Government of India. The main aims of the population policy are (a) to reduce the rate of population growth in order to raise the level of living the people and (b) to ensure healthier, happier and fuller family life.

The Government of India, therefore, launched a Four-Fold Family Planning Action-*cum*-Research Programme during the First Five Year Plan period. The main four components are Training, Education, Services and Research. As against a provision of Rs. 65 lakhs during First Five Year Plan, a provision of Rs. 497 lakhs, including Rs. 97 lakhs in the States, was made during the Second Five Year Plan period. The tentative figures of expenditure are as follows :—

Categories	Rs. (in lakhs)
1. Training	15·75
2. Education	50·00
3. Services	373·25
4. Research	50·00

In order to give an impetus to the Family Planning Programme during the Second Five Year Plan, a Central Family Planning Board, a Standing Committee of the Family Planning Board and a Committee on the Physiology of Human Reproduction of the Indian Council of Medical Research have been set up at the Centre. A Demographic Advisory Committee with Dr. V. K. R. V. Rao as Chairman was formed during 1959.

International Conference :

The Sixth International Conference on "Planned Parenthood" was held at Vigyan Bhawan, New Delhi from 14th to 21st February, 1959 with a theme "Family Planning Motivation of Methods". A grant of Rs. 55,000

was sanctioned to Family Planning Association of India, Bombay by the Central Government for this purpose in addition to providing accommodation at Vigyan Bhawan, New Delhi. 750 delegates and observers from 27 countries including Austria, Barbados, Belgium, Bermuda, Ceylon, Denmark, Germany, Holland, Honk Kong, Italy, Jamaica, Japan, New Zealand, Pakistan, Puerto Rico, Singapore, South Africa, Sweden, Switzerland, United Kingdom and United States with India playing the host attended the meeting.

Board Meetings :

The sixth meeting of the Central Family Planning Board was held at New Delhi on 15th and 17 February, 1959. The meeting of the Board was attended by the delegates attending the International Planned Parenthood Conference and representatives of the State Governments. The seventh meeting of the Central Family Planning Board was held on 31st August, 1959 to consider the Family Planning Programme during the Third Five Year Plan period. On the recommendations of the Central Family Planning Board, the "Family Planning Third Five Year Plan Committee" was set up with Shrimati Daanvanti Rama Rao as Chairman, Shrimati Shakuntala Paranjpye, Shrimati Soundaram Ramachandran, Dr. Kamala B. Ramier, State Family Planning Officer, Kerala, Dr. H. N. Unwalla, State Family Planning Officer, Rajasthan as Members and Lieut. Colonel B. L. Raina, Director (Family Planning) as Secretary to review the progress made so far and to make recommendations regarding Family Planning Programme during the Third Five Year Plan period.

The first meeting of the Demographic Advisory Committee was held on 10th October, 1959 and the second meeting on 23rd November, 1959.

Family Planning Programme has made notable progress during 1959 and in some States the pace of progress has been considerably accelerated. Family Planning Boards have now been formed in all States except in Jammu and Kashmir. Family Planning Officers have been appointed in the States of Andhra Pradesh, Bihar, Bombay, Kerala, Madhya Pradesh, Madras, Mysore, Orissa, Punjab, Rajasthan, Uttar Pradesh and West Bengal. Family Planning work in other States is looked after by the Maternity and Child Health Officers. In order to know the difficulties of the State Governments in the implementation of the programmes, the representatives of the States are invited to the Board meetings. The Officers of the Government of India went round the States for assisting them in the implementation of the programme.

Budget Provision :

A provision of Rs. 80 lakhs was made during the year 1959-60. This provision was made under the following three heads :—

Heads	Budget (in Rs.)
(i) B. Grants for Public Health purposes, B.1 Grants to State Governments. B.1 (10)—Family Planning	42,22,000
(ii) B. Grants for Public Health purposes— B.2. Other Grants B.2 (19) Family Planning.	19,45,000
(iii) E. Miscellaneous E. 4 Family Planning	18,33,000
TOTAL .	80,00,000

Besides, Rs. 8·37 lakhs were provided for Family Planning education in the budget for 1959-60 of the Directorate of Advertising and Visual Publicity, Ministry of Information and Broadcasting, Government of India, New Delhi.

The details of amount sanctioned including direct expenditure during the years 1956, 1957, 1958 and 1959 are as given below :—

Categories	Years			
	1956	1957	1958	1959
	(Rupees in lakhs)			
(i) Grants for opening and maintenance of clinics	2·29	14·81	4·02	22·68
(ii) Training and Education	0·75	1·87	3·22	3·67
(iii) Research	3 81	6·25	3·29	5·70
(iv) Organisation	0·93	0·98	0·45	0·70
TOTAL .	8·48	23·91	10·98	32·75

In addition to above about Rs. 31·66 lakhs were released to State Governments as lump sum ways and means advance upto December, 1959 during the financial year 1959-60.

Grants sanctioned to State Governments, Local Bodies and Voluntary Organisations during the years 1956, 1957, 1958 and 1959 are as follows :—

Categories	Years			
	1956	1957	1958	1959
	(Rupees in lakhs)			
(i) State Governments	0·43	6·01	0·90	13·08
(ii) Local Bodies	0·06	1·74	0·61	0·78
(iii) Voluntary Organisation . . .	5·29	13·79	9·08	13·44

The State-wise details of amount sanctioned during the years 1957, 1958 and 1959 are shown in Table No. 51.

Clinics :

Out of a plan target of 2,000 rural and 500 urban clinics, 1,200 rural and 300 urban (100 rural and 30 urban during 1956-57; 200 rural and 40 urban during 1957-58; 300 rural and 80 urban during 1958-59 and 600 rural and 150 urban during 1959-60) clinics were to be opened by March, 1960. Against this target, 723 rural and 314 urban clinics were opened by the end of 1959. These included 21 clinics in Medical Colleges and 63 in other teaching institutions for medical auxiliaries. Apart from regular clinics, out of 4,163 Maternity and Child Health Centres in the country, 1,318 Maternity and Child Health Centres also gave advice on Family Planning methods. Out of 310 districts in the country, Family Planning Clinics existed in 262 districts. It was also decided to give a token grant of Rs. 1,000 to all welfare agencies run by the employers of labour for distribution of contraceptives and educational material and also for providing free facilities for training. A grant of Rs. 1,500 per annum was also sanctioned to all the

Hospitals, Dispensaries, Primary Health Centres and Maternity Homes run or recommended by the State Governments for the distribution of contraceptives. In rural and urban areas, contraceptives were issued free to those with income below Rs. 100 p.m. at half price to those with income between Rs. 100 to 200 p.m. and at cost price to those with income above Rs. 200 p.m.

The State-wise number of clinics opened during the First Five Year Plan period during the years 1956, 1957, 1958 and 1959 is shown in Table No. 52.

Sterilization :

The Central Family Planning Board recommended the inclusion of sterilization operation in the family planning programme on the merit of each case after careful examination by a qualified doctor with the consent of both husband and wife in hospitals and institutions where facilities existed.

The Central Council of Health at its meeting held at Shillong in January, 1959 recommended that the State Governments should intensify the programme including surgical facilities at their hospitals and medical institutions. The Executive Committee of the Medical Council of India and the Indian Medical Association had also supported sterilization.

The Ministry of Home Affairs have decided to grant special casual leave not exceeding six working days to Government servants who undergo sterilization operation.

The Ministry of Health have sanctioned extra personnel to strengthen the staff of the Safdarjang Hospital, New Delhi for sterilization operations and training facilities.

Sterilization facilities are being extended in the States especially in the States of Madras and Mysore. The number of sterilization cases reported in India since 1956 are as follows :—

Years	Sterilization operations performed		
	Males	Females	Total
1956	2,879	5,256	8,135
1957	3,760	10,797	14,557
1958	10,676	17,853	28,529
1959	16,630	23,607	40,237

Training :

During the First Five Year Plan period, 67 persons were trained in family planning in short-term courses. During the Second Five Year Plan, intensive training programme was launched and 2,728 persons, including 528 during 1959, were trained.

During the year 1959 in addition to two training centres—one at Bombay and the other at Ramanagaram, a third centre was developed in Delhi. The first course of training at Delhi will be started during the year 1960.

In addition to one training centre for Family Welfare Workers sanctioned to Andhra Mahila Sabha Nursing Home, Madras during the year 1958, a grant of Rs. 1,05,000 was sanctioned each to Matru Sewa Sangh, Nagpur and Kamala Nehru Hospital, Allahabad for starting training centres for "Family Welfare Workers". The first course of training at all the three centres was started during the year 1959.

The State Governments were requested to start 42 Regional Training Centres during 1957-59. So far 12 Regional Training Centres one each in the States of Andhra Pradesh, Assam, Kerala, Madras, Orissa and West Bengal, two in Punjab State and four in Bombay State were established and 704 persons were trained at these centres so far.

A grant of Rs. 18,000 was sanctioned to Family Planning Association of India, Bombay in November, 1957 for establishing a Touring Training Team and 475 persons were trained. Sanction was received for the creation of 10 additional touring teams.

Education :

Wide awareness in favour of family planning has been created. 4,45,000 copies of posters, 3,27,400 copies of pamphlets and 3,49,000 folders on various aspects of family planning have so far been printed and distributed to all agencies doing family planning work; 590 prints of the film "Family Planning" produced by the Ministry of Information and Broadcasting Govt. of India, New Delhi were purchased and distributed. A grant of Rs. 2,000 was sanctioned for the supply of 2,000 copies of the "Parivar Niyojan". Special number of "Swasth Hind" was published by the Central Health Education Bureau in February, 1959 at the time of International Planned Parenthood Conference, which was held from 14th to 21st February, 1959. A Family Planning Exhibition was held at the Constitution Club, Curzon Road, New Delhi from 16th February to 5th March, 1959, which was inaugurated by the Vice President of India. About 80,000 people visited the exhibition and 7,037 persons, who showed a keen desire of family planning, advice and services, were referred to clinics.

Grants were sanctioned for celebration of "Family Planning Week" in Andhra Pradesh, which was celebrated from 19th to 25th February, 1959. Family Planning Exhibitions were also held in Bombay (Shrivampur), Bangalore, Andhra Pradesh (Bhadrabathi) and Lucknow.

In order to emphasise that family planning promotes community welfare and happiness in the family, community family welfare services are being developed around the clinics. All the clinics receiving Central assistance celebrated "Children's Day" on 14th November, 1959 when "Children's Fair", "Baby Shows" and public meetings were held.

In order to motivate the general public and to carry the message of family planning to all corners of the country, standing committee of the Family Planning Board recommended that Honorary Family Planning Education Leader should be appointed on an honorarium of Rs. 4,000 per annum. Ten Education Leaders were appointed one each in Andhra Pradesh, Kerala, Madhya Pradesh, Mysore, Uttar Pradesh and West Bengal and two each in Bombay and Delhi during the year 1959. Leaders in other States are being appointed.

Programmes on family planning which include talks, discussions, dialogues, interviews etc., are being broadcast by different stations of the All India Radio in various languages. The number of programmes has been on increase since January, 1958 as may be seen from the following table :—

Period and Year	Number of programmes
(i) January to March, 1958	52
(ii) April to June, 1958	87
(iii) July to September, 1958	78
(iv) October to December, 1958	96
(v) January to March, 1959	109
(vi) April to June, 1959	Not available.
(vii) July to September, 1959	80

Family Planning Day was celebrated throughout the country on 18th December, 1959 and sanction was accorded to all State Governments to incur expenditure not exceeding Rs. 300 for each district headquarters, capitals and other towns with a population of one lakh and above. Special posters with the caption "His Future is in Their Hands; Family Planning Brightens It" were distributed for display. A special number of Swasth Hind was issued by the Central Health Education Bureau, Directorate General of Health Services, New Delhi.

Demography :

A Demographic Training and Research Centre was esetablished at Bombay and three demographic research centres were established one each at Delhi, Calcutta and Trivandrum. The Demographic Research Centre at Delhi University in 1958-59 conducted a study of Contributory Health Service Scheme Clinics patients in Delhi. The study revealed that by using contraceptives under clinics guidance, it is possible to reduce expected pregnancies by about 80 per cent.

CHAPTER VI

MATERNITY AND CHILD HEALTH SERVICES

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CHAPTER VI

MATERNITY AND CHILD HEALTH SERVICES

Importance has been given to the maternity and child health services in India since independence. As a result of this the maternity and child health services have made good progress and maternal and infant mortality has come down. The Maternity and Child Health Centres are being opened throughout the country. Administratively, the services have become a part and parcel of health programmes of the States. Technical direction has been provided by the Centre. The number of Maternity and Child Health Centres have increased and the training programmes for the maternity and child health services have expanded. The International Agencies have continued their aid. Nearly half of the existing units have received standard equipments and drugs and diet supplements under international aid to provide a high standard of health services to children and to prevent mal-nutrition among them.

Since the importance of the paediatrics services has been recognised, a sum of Rs. 45 lakhs was provided in the Second Five Year Plan period to assist medical colleges in the improvement of paediatrics training so that the medical personnel can, during their training, receive adequate instructions in the subject and be better equipped to play their role in child health services.

The maternity and child health services are rendered mainly through Maternity and Child Welfare Centres and Primary Health Centres. The trend continued to be towards the integration of health centres both in rural and urban areas. Evidence of this can be seen in the establishment of Primary Health Centres in rural areas where both preventive and curative works are undertaken side by side. Since it is not possible to afford institutional care to the entire population, domiciliary maternity care has also been provided through Primary Health Centres.

Table No. 53 shows necessary statistics regarding the number of Maternity and Child Welfare Centres in different States during the year under report.

Training :

One of the important aspects of the development of maternity and child welfare services in the country has been the training of different personnel to man the services since a large bulk of midwifery services in villages would continue to be rendered by dais already practising in villages.

Training of Health Visitors :

A Centrally assisted scheme for training of health visitors to staff Maternity and Child Welfare Programmes under community projects was started in 1954-55 at 8 Health Schools in various States at Lucknow, Nagpur, Visakhapatnam, Madras, Amritsar, Hyderabad, Sirur and Calcutta and at the Lady Reading Health School, Delhi.

The training courses are of two kinds *viz.*, one of 1½ years duration for candidates, who possess necessary education of matriculation standard and senior diploma in midwifery and the other is an integrated Midwifery-*cum*-Health Visitors Course of 2½ years for candidates recruited directly for training after completion of the school final education. During the Second Five Year Plan period, it is proposed to train over 1,260 Health Visitors with Central assistance. For this purpose the existing nine schools were expanded and 8 new schools established at Bareilly, Allahabad, Rajkot, Ranchi, Indore, Trivandrum, Srinagar and Bangalore. The School at Ranchi was amalgamated with the School at Patna.

During 1959-60, a provision of Rs. 6,45,000 was made in the budget estimates for grants to State Governments on account of Central share of expenditure on this training programme. During 1959, out of 1,108 and 1,172 candidates admitted to the Health Visitors and Integrated Midwifery-*cum*-Health Visitors Course, 925 and 401 candidates completed their training.

Training of Midwives and Auxiliary Nurse Midwives :

During 1959-60, a provision of Rs. 12,00,000 was made in the budget estimates for grants to State Governments on account of the Central Government's share of expenditure on this training programme. Besides, a provision of Rs. 7,00,000 was also made for grant-in-aid to private institutions for the implementation of the Scheme. In the beginning of the year 1959, there were 107 institutions for training of Auxiliary Nurse Midwives, which increased to 124 at the end of October, 1959. The total number of students admitted since inception of the scheme was 3,524 of whom 1,028 students have qualified upto the end of 1959.

Training of Dais :

A short six month course has been designed to orient the indigenous dais, already practising in villages, in modern techniques of asepsis and to make better and fuller use of their services. Under the Second Five Year Plan, the Government of India have sanctioned a centrally assisted scheme for training of 36,000 dais at an estimated cost of Rs. 90 lakhs with a view to improving their standard of practice.

Under this scheme, 150 units for the training of dais will be established in States, each unit covering a population of about 66,000. Each unit will train approximately 60 dais in a year in two batches of 30 each. There will thus be one dai for 1,000—1,500 population, or one dai for every 50 births. The Central assistance will be Rs. 12,450 per unit per annum for meeting the cost of bags for dais and their refills and for each reward to dais, trained at these units.

Training programmes have already been started in States/Administrations of Andhra Pradesh, Bihar, Bombay, Andaman and Nicobar Islands, Himachal Pradesh, Laccadive and Islands, Madhya Pradesh, Manipur, Madras, Mysore, Orissa, Pondicherry, Punjab, Rajasthan, Tripura, Uttar Pradesh and West Bengal. So far 4,472 dais have been trained and 1,288 dais are under training.

Paediatric Centres :

Provision has been made in the Second Five Year Plan period (1956-61) to assist Medical Colleges to improve paediatric training, so that medical personnel can, during the training, receive adequate instructions in paediatric. The scheme has been implemented in Medical Colleges at Hyderabad, Trivandrum and Agra and was under implementation at Bombay. The Government of India have also sanctioned the implementation of the scheme in Medical College, Darbhanga. The Mysore and Orissa State Health Authorities were also requested to put up proposals for the establishment of Paediatric Centres in their States.

The activities of the States in respect of Maternity and Child Welfare Services and training programmes are as given below :—

Andhra Pradesh : During 1959, the number of admissions for Health Visitors Course was raised from 60 to 120. Three additional schools, one each at Karimnagar, Cuddapah and Chittoor, were started with the Government of India's assistance for training of Auxiliary Nurse Midwives. The training of indigenous dais under Government of India subsidy resulted in the establishment of 15 centres to train 60 dais per unit. Side by side, the routine training of dais in Telegana region, wherever Auxliliary Nurse-Midwives and Midwives were posted, was carried out and there were 3,000 trained dais at the end of 1959.

The Government of India's refresher course for 3 months was given in Niloufer Health School, Hyderabad to Women Medical Officers from all over the country, who were engaged in maternity and child health services.

Assam : 100 Maternity and Child Welfare Centres and four Maternity Homes with 48 beds continued to function in this State during 1959. Besides, a Maternity Ward with 15 beds attached to each District Hospital also continued to function. Domiciliary midwifery services and health visitors services were extended during the year under report. It was also proposed to attach a Maternity and Child Welfare Centre to each Primary Health Centre established in rural areas of the State.

Training facilities for Nurses, Nurse-Midwives, Dais and Midwives were available at 4 centres attached to four big hospitals. Besides, refresher training course for a period of one month for Nurses, Sisters and Health Visitors continued to function during the year under report.

Bihar : The schools to train Lady Health Visitors were functioning at Ranchi and Patna. Four schools at Ganga, Bettiah, Ranchi and Darbhanga were imparting training in Auxiliary Nurse-mid-wifery. During the year under review, 30 Dais Training Centres were functioning to impart training to 375 Dais in 6 months course and 108 Dais in one month course.

Bombay : 66 Primary Health Centres of the Government of India pattern, each serving about 60,000 population, were opened, bringing the total to 367 including Maternity and Child Health Centres, Primary Health Units and combined Medical and Public Health Units, which functioned satisfactorily during the year under report. The UNICEF continued to supply free drugs and diet supplements to the existing Primary Health Centres and Maternity and Child Health Centres.

Kerala : Three District Maternity and Child Health organisations continued to function during the year under report as in the previous year.

One batch of 30 Health Visitor Trainees completed their training during 1959 and they were posted as Health Visitors in different Health Units. Another batch of 30 Senior Midwives were admitted to the Health Visitors School. Training of Auxiliary Nurse-Midwives continued in the seven Women and Children's Hospitals. 162 Auxiliary Nurse-Midwives completed their training and 50 Public Health Midwives in service underwent a refresher course of 4 weeks duration.

Madras : The provision of Maternity and Child Health Services is the primary responsibility of the local bodies. To stimulate interest in them, subsidy was granted by the Government towards maintenance grants. In all, there were 1,759 Maternity and Child Welfare Centres functioned in this State during 1959, manned by 113 Women Medical Officers, 298 Health Visitors and 2,506 Maternity Assistants rendering domiciliary mid-wifery services.

It was proposed to train 125 Dais in five districts of Chingleput, South Arcot, North Arcot, Madurai and Tirunelvelli. 82 Dais were trained and 26 candidates were admitted to the regular Health Visitors' Course of 18 months duration during the year under report.

Madhya Pradesh : So far a total of 62 Maternity and Child Welfare Centres were converted into Primary Health Centres. Provision exists for giving institutional midwifery services through Maternity Hospitals, Maternity Homes, Maternity Wards and Primary Health Centres. Since it is not possible to afford institutional care to the entire population, domiciliary maternity care was provided through Primary Health Centres. Owing to insanitary conditions existing in the home, provision was made for encouraging villagers to establish suitable places "Matri Grihas" in the villages where women could go for confinement with trained indigenous dais in attendance. 550 such "Matri Grihas" were established during 1959.

Orissa : There were 68 Maternity and Child Welfare Centres in this State during 1959. Facilities also existed in the Primary Health Centres for Maternity and Child Health Services. Anti-natal and post-natal clinics were held regularly twice a week by the Lady Doctors and Health Visitors attached to the Maternity and Child Health Centres. Dais rendered domiciliary mid-wifery services in the localities.

Training of Health Visitors continued at the Lady Reading Health School, Delhi and 13 candidates were deputed for this training during the year under review. Seven Auxiliary Nurse-Midwives training classes functioned in this State having a provision to train 185 candidates. Two dais training centres were opened during the year under report and the number increased to 23.

Punjab : There were in all 278 Maternity and Child Health Centres functioning in this State during the year under report as against 59 such Centres in 1948.

Rajasthan : In order to give integrated services to mothers and children, Maternity and Child Health Wings were added to Primary Health Centres. Domiciliary services were given both in urban and rural areas by the Midwives and the Health Visitors. Primary Health Centres were the focal points from which maternal and child health activities radiated in rural areas. Each centre serves an average population of 80,000 people. The staff available for Maternity and Child Health Wings consisted of a Lady Doctor, a Health Visitor and four Midwives. Each Primary Health Centre had 3 Sub-centres managed by one Midwife, who supervised the work and gave practical training to indigenous dais in that area.

Uttar Pradesh : There were 1,148 Maternity and Child Welfare Centres functioning in Uttar Pradesh in 1959. Some of the Centres have provision both for a Mid-wife and a trained Dai, but some have for midwife only. Out of 1,148 Centres, 679 are covered by Primary Health Units and Primary Health Centres, having the provision of one Health Visitor and four Midwives working under the supervision of the Medical Officer. The remaining Centres were directly under the control of the District Medical Officer of Health.

In urban areas where Maternity and Child Health Services are under the Municipality or Red Cross, major towns had Maternity Homes under the charge of a Lady Doctor and the smaller towns had services of Health Visitors and Midwives. The Indian Red Cross Society gave grants to maintain 12 doctors, who, in addition, to supervising the Maternity and Child Health Centres working in towns, helped the training programme of Auxiliary Nurse/Midwives.

The Auxiliary Nurse/Midwifery Training Centres at Lucknow, Kanpur, Rampur, Varanasi, Dehradun, Saharanpur, Bareilly, Moradabad, Faizabad, Jhansi, Basti and Nainital continued to function each with a capacity to train 30 students. 126 students were admitted and 60 passed out during the year under review.

During the year under report, 728 dais were trained. In addition to the above scheme, the Government of India scheme for more intensive programme for training of village Dais at 30 units in 23 districts of the State, each such unit having a capacity to train 60 dais in a year in two batches of 30 each, also continued and 195 dais were trained during the year under report.

West Bengal : In 1959, the Maternity and Child Health Services were made available to mothers and children all over the State through Hospitals, Maternity Homes, Health Centres etc., where a total of 4,241 maternity beds were available therein. The Lady Medical Officers, Health Visitors, Midwives, trained Dais and other Maternity and Child Health and Family Planning staff attended the mothers at homes and clinics and also imparted necessary help and instruction to them in order that they might take care of their own health and that of their children. The staff, while rendering domiciliary midwifery, health visiting and home-nursing services, also took up vaccination and inoculation work to immunise the infants and toddlers.

Under UNICEF aid programme, almost all Maternity and Child Welfare Centres were provided not only with costly equipments required for pre-natal and post-natal care, but also with costly drugs and diet supplements.

A Public Health Orientation Training Course to train up Lady Health Visitors started last year was continued during the year 1959. 33 trained nurses were given training at Dr. H. C. Mukherjee Memorial Health School, Singur, Hooghly. The training for Assistant Mid-wifery has since been upgraded in order that persons having this training may have their names registered under the Nursing Council and get the full course of training as Auxiliary Nurse-*cum*-Midwife.

Andaman and Nicobar Islands: There was one Maternity and Child Welfare Centre functioning under the supervision of Lady Medical Officer and was attached to the Civil Hospital, Port Blair and was assisted by UNICEF in diet, drugs, etc. Anti-natal and post-natal services were also carried out in the Centre. No arrangements existed for domiciliary or home nursing at the Headquarters area. However, 4 trained Dais were appointed and posted to different rural areas to provide maternity relief work. Two Lady Health Visitors were appointed during 1959 so that two more Maternity and Child Welfare Centres may be opened and started functioning in this territory.

Delhi: The Maternity and Child Health Services were rendered, both domiciliary and institutional, through 52 Centres and 23 Sub-centres under the Municipal Corporation of Delhi during 1959. Services in these Centres were rendered by 142 trained Dais, 67 Lady Health Visitors and 14 women doctors. The staff of Maternity and Child Welfare Centres conducted deliveries, and paid home visits. Expectant nursing mothers and under-nourised children were given free supply of UNICEF skimmed milk. New Centres and Sub-centres were opened in Chandwala, Dharmshala, Moti-Bagh, Lodi Colony, Azadpur and Naraina during the year under review. Training of dais were afforded through 25 Maternity and Child Welfare Centres and out of 84 candidates, 50 dais qualified in the Punjab Dai's examination during 1959.

Himachal Pradesh: 35 Maternity and Child Welfare Centres were functioning in this Pradesh during 1959. The Lady Health Visitors and the Mid-wives during their routine house visit programme conducted deliveries under sanitary conditions and provided anti-natal, post-natal, infant and toddlers visits to homes. Besides, routine health check-up, minor ailments were also looked after. Demonstration and advice on diet was also given by the staff. Health education was imparted to mothers in the motivation of "Family Planning", their nutrition and personal and environmental hygiene.

Dais were trained in all Maternity and Child Welfare Centres, where a trained Lady Visitor was appointed. 91 indigenous dais took the examination successfully during the year under report. Registration of dais was undertaken by this Administration and other nursing personnel were registered with the Punjab Nursing Council. 13 Maternity and Child Welfare Centres and 7 Primary Health Centres were aided by UNICEF.

Manipur: The Maternity and Child Welfare Services is becoming more popular in the territory and more centres are proposed to be opened in the rural areas. 6 Maternity and Child Welfare Centres functioned during 1959. Health Visitors and Nurses were trained outside the territory and arrangements for training of Dais and Midwives were available at Imphal Headquarters.

Pondicherry : In Reddiapalayam Maternity and Child Welfare Centre, the training of dais was started and 7 dais were trained during the year under report.

CHAPTER VII

NURSING SERVICES

CHAPTER VII

NURSING SERVICES

(i) General Conditions

There was a general improvement in the nursing services and more particularly in the field of nursing education. As will be seen in the reports from the States, a shortage of nurses was experienced in most of the States, though it was difficult to assess actual shortage of candidates for existing sanctioned posts as shown in Table No. 54. As a general rule, there was no shortage of candidates applying for admission to the various basic and post-certificate courses. The educational standard of the applicants was higher, though a small, but increased percentage of candidates had passed Intermediate or higher examination.

A course of Master of Nursing degree was established at the College of Nursing, New Delhi. A College of Nursing was established in Hyderabad. A course in Public Health Nursing was established in Bombay and a course for orientation in Public Health Nursing for trained nurses was established in Gwalior (Madhya Pradesh). Refresher courses on an all India basis were organised by the Directorate General of Health Services, New Delhi with assistance from W.H.O. and UNICEF for Nursing Superintendents, Sister Tutors and Paediatric Nurses. 77 Nurses participated in these courses. The Government of India continued the grant of financial assistance to Nursing Schools for integration of public health in the basic course and 22 schools (18 Government and 4 private) were so assisted. Grants were also given by the Government of India to 132 centres for training auxiliary nurse-midwives of which 28 were established in 1959. The number of auxiliary nurse-midwives students in the Government of India aided schools was 2,320. The Government of India continued to render financial assistance to institutions training auxiliary nurse-midwives at an estimated cost of Rs. 89 lakhs, half of which was to be borne by the State Governments. By the end of December, 1959; 1,146 students had qualified and 2,260 were under training. The ratio of nursing staff to beds and ratio of staff to population in the various States and Administrations are given in Table No. 55. According to the Second Five Year Plan norms to aim at there should be one hospital bed for 1,000 population, one nurse and one midwife for every 5,000 population. It is evident from Table No. 55 that the shortage of nurses persisted in the country at the end of the year under report.

Nine nurses were sent abroad for further training on fellowships awarded by T.C.M., W.H.O., Colombo Plan and the Rockefeller Foundation as shown in Table No. 56. Fourteen nurses returned after study abroad.

The valuable assistanve was received, as in previous years, from international nurses assigned to different States. 32 nurses were working in W.H.O. assisted projects including a Nursing Adviser to the Director of Medical Services, Madras, 2 Paediatric Nurses in the paediatric projects in Bombay and Madras, 2 Public Health Nursing teachers and a Nursing Tutor for integration of public health in the basic nursing course and 26 in the public health and tuberculosis projects. Six nurses were assigned by T.C.M.; 4 for Madhya Pradesh, one for the Central Supply

Project at Safdarjang Hospital, New Delhi and one as Nursing Adviser to the Director of Medical and Health Services, Rajasthan State, Jaipur. The number of Nursing Schools, number of students admitted and the number of post-certificate institutions along with the number of students qualified during the year 1959 is shown in Table No. 57.

(ii) College of Nursing, New Delhi

The College of Nursing is affiliated to the Delhi University which provides a four year course leading to degree of B.Ss. (Hons.) in Nursing. The post-certificate course previously conducted at the School of Nursing is now conducted at this College. The following courses were continued during the year under report :—

1. B.Sc. (Hons.) in Nursing;
2. Sister Tutor's Course;
3. Nursing Administration Course;
4. Midwives Tutor's Course; and
5. Ward Sister's Course.

A new two year course leading to the degree of Master of Nursing was started with six students at this College in October, 1959, which was inaugurated by the Union Minister for Health.

A Technical Advisory Committee of the College advises the college authorities on technical matters. This Committee meets once in a year. During the year under report, 34 students were admitted to the four year B.Sc. (Hons.) in Nursing and 13 qualified in the final year of the B.Sc. (Hons.). In all there were 104 students in the B.Sc. Course in the College during the year under report. These students came from all parts of India. 53 students in B.Sc. classes and 3 in Mid-wifery Tutor Course were awarded scholarships and stipends by different authorities *e.g.*, the Central Government, Lady Dufferin Fund and some State Governments.

Thirty-nine teachers served the teaching programme in the College during the year under report. Besides, about 40 external lecturers from specialised fields were invited to address the College studnts on various subjects. One post of Senior Sister Tutor and one post of Professor of Nursing Education was created in this College. Two members of the staff proceeded on leave to join Master in Nursing Course at this College.

The students of the College were assigned the Wards at Irwin and Safdarjang Hospitals, New Delhi, T.B. Hospital, Mehrauli, Victoria Zanana Hospital, Delhi and the All-India Institute of Medical Sciences, New Delhi for their practical study. The University laboratories and the laboratories of the Maulana Azad Medical College, New Delhi and All India Institute of Medical Sciences, New Delhi were used for teaching practical work. These students attended the Maternity and Child Welfare Centres, Babar Road, New Delhi and Chawla Rural Centre for their practical experience in urban and rural field works.

The Child Guidance Clinic continued its useful and valuable services in and around Delhi during the year under report. The clinic provides services to the public free of charge not only directly by giving guidance

to children and their parents in psychological attitudes but also brings out social education pamphlets in Hindi and English on child care and mental hygiene. Some research work was also carried out by the clinic regarding the development of child in social and cultural set up and its implications.

Recreational facilities and College Library facilities continued to be available in the College quite adequately. The Central Government gave a budget grant of Rs. 3,91,423 for the College expenses. The total income of the College was about Rs. 5,00,000 and the expenditure during the year under report was Rs. 4,98,951.

(iii) Indian Nursing Council, New Delhi

The Council, which was reconstituted in 1958 under the amended Indian Nursing Council Act of 1957, held its meeting on the 24th February, 1959 at New Delhi. Lt. Col. Jaswant Singh, the then Director General of Health Services, was elected its President and Miss M. Doctor, Superintendent of Nursing Services, Bombay was elected as Vice-President. The Council also elected its new Executive Committee of seven members. Miss T. K. Adranvala, Nursing Adviser to the Government of India, was reappointed as Secretary and Treasurer of the Council.

The Council collected some information from the States for the Planning Commission during the year under report. In August, 1959 the Council took steps to compile the Indian Nurses Register. The Council granted recognition to the Orissa Nurses and Midwives Examination Board, for granting qualifications in General Nursing, Midwives and Auxiliary Nurse-Midwives. A Committee of three members of the Council to study and report on the most suitable arrangement for administration of Nursing Schools and measures for establishment of advance courses in Nursing and Nursing Research Programmes was appointed by the Council during the year under report.

The Executive Committee of the Council at its meeting held on 24th February, 1959 appointed 27 Inspectors for inspecting training schools in India. The Executive Committee held a second meeting on the 11th December, 1959 in which it considered the duties of the Midwives and some other matters concerning General Nursing and Auxiliary Nurse-Midwives Courses.

The Council collected yearly information from the training schools for Nurses etc., regarding the facilities available for training of Nurses, Midwives, Auxiliary Nurse-Midwives and Health Visitors. As empowered under Section 11(2) (a) and (b) of the amended Indian Nursing Council Act of 1957, the Council accorded approval for the registeration in India of 37 Indian and non-Indian Nurses holding qualifications in Nursing etc., from the countries having no reciprocal arrangements with the Indian Nursing Council. The Council also collected yearly information from the State Nursing Councils regarding the number of qualified in different Nursing Courses and the number of registered nurses etc., up to the beginning of the year 1959.

(iv) States' Activities

Assam : There was not much shortage of nursing staff in this State. Three more training Schools for Auxiliary Nurse-Midwives and one for Nurses were opened in this State during the year under report. One Assistant Nursing Superintendent was also appointed to assist the Superintendent

of Nursing Services. New buildings for nurses quarters were constructed. Two candidates were sent for the B.Sc. Nursing Course ; four for Diploma Course in Public Health Nursing and two for the Health Visitors Course. 20 Nurses were given the orientation course in Public Health Nursing and 16 of them were working in Primary Health Centres. One Assistant Nursing Superintendent returned from Australia after getting post-graduate training in Nursing Administration. The training of dais was stopped as the number of dais was surplus in this State.

Bombay : There was no shortage of nursing staff experienced in this State. The State Government sanctioned Rs. 1,47,000 only for providing equipment, furniture and library books etc., for 21 training centres in this State. A sum of Rs. 4,600 was given by the Dufferin Fund for supplementing recreational activities and amenities at training schools in the State. All schools continued to experience difficulties of inadequate residential accommodation for students and trained staff. Some buildings were hired for meeting the shortage of quarters. Two new Schools for Nurses and Midwives were opened. Eight Sister Tutors and four Public Health Nurses were appointed in teaching schools. Two nurses were sent for B.Sc. Course in Nursing, four for Sister Tutors, one for Midwife Tutors, 15 for Public Health Nurses and two for Psychiatric Nursing. Eighty Nurses participated in Ward Administration and Teaching Refresher Courses, 15 Nurses in Paediatrics and 20 Nurses in Operation Theatre technique refresher course.

Jammu and Kashmir : The actute shortage of trained nurses had hampered the State Government to fill up a very large number of sanctioned posts which were lying vacant in the Government Hospitals. In order to make up this shortage two training schools for nurses were starter at the Central Hospitals at Jammu and Srinagar. Twenty candidates are admitted each year in each school and the first batch of successful candidates would qualify by July, 1960. Efforts were made to recruit trained nurses from other States for meeting the requirements of this State.

Kerala : Acute shortage of nursing staff was persistent in this State. A Superintendent of Nursing Services was not yet appointed. Adequate hostel accommodation was available for the trained staff and students. The number of students at Schools of Nursing, Calicut and Ernakulam increased during the year under report. The Public Health Nursing was introduced in the basic nursing course in three Nursing Schools in the State. A refresher course for 50 Midwives was organised during the year under report. Four Nurses were sent for post-certificate courses at the College of Nursing, New Delhi and one was sent to Australia under Colombo Plan for advance course in Nursing Administration. One Nurse returned from abroad after completing her higher studies in Nursing.

Madhya Pradesh : There was a shortage of qualified and experienced nursing staff in the State. Steps were taken to increase the number of nurses and teaching staff for the hospitals and nursing schools. More students were admitted to the training centres. The nursing services were expanded as more trained staff joined hospitals and training centres in the State. More posts of matrons and sisters were created to have better nursing services and care in hospitals. 262 students in Nursing, 59 students for Health Visitors and 319 in the Auxiliary Nurses-Midwives training were admitted. Due to shortage of Midwives for general services to the people the State Government started the training of 660 dais at seven centres. Four nursing

experts arrived from U.S.A. for developing and improving the nursing education programmes at M. Y. Hospital, Indore. Three W. H. O. Nursing Experts continued with their work in the Directorate of Health Services, Indore and Public Health Orientation Programme for trained nurses at Gwalior. Many steps were taken to improve and develop nursing education, nursing services and supervision of hospitals and training schools, primary health centres making nursing profession popular by visiting schools for senior girls. In 1959 expenditure on State Nursing Services was Rs. 21,20,000 out of a total budget provision of Rs. 30,20,000 and Rs. 6,60,600 were spent on nursing education and training programmes out of a budget provision of Rs. 8,24,600. Proposals for appointing Regional Nurse Supervisor in different regions of the State were included in the Third Five Year Plan. Also a Directress of Nursing will be appointed at State level for administration of the State Nursing Services and a proposal for constituting a nursing cadre was under consideration.

Hostel accommodation was inadequate in the State Hospitals and Nursing Schools. New quarters were completed at Ujjain and Gwalior. The buildings at Ratlam and Indore were still under construction. Five new training schools for Auxiliary Nurse-Midwives were started in the tribal areas with 90 students. Four T.C.M. Nursing Experts were assigned to help to start a Nursing College at the M. Y. Hospital, Indore.

One Nurse was deputed for Nursing Administration Course, three for Sister Tutors in Delhi and three for the Public Health Nursing at Calcutta. One Nurse returned after completing Nursing Administration Course, three after Sister Tutors, three after Public Health Nursing at Calcutta and three Public Health Nursing at Indore. Two refresher courses were held for Health Visitors and Midwives in the State. Two Nurses returned from U.S.A. after having their higher studies in Nursing. A Course for Tuberculosis Health Visitors was also started with 5 students.

Madras : There was a shortage of trained nurses in the Government Hospitals as the number of existing posts was not sufficient for the number of beds in the hospitals. The number of posts could not be increased during the year under report due to financial limitations. Adequate hostel accommodation was available for nursing staff in most of the places.

The question of creating a post of the Sperintendent of Nursing Services in this State was under consideration. A Nursing Adviser from W.H.O. was assigned to the State in October, 1959 so that she could help in reorganising nursing education and give expert advice on Nursing Services in the State. A Nursing Superintendent was appointed as her counterpart. In order to improve the present organisation of the nurses training and to introduce certain reforms in the training, a scheme for employment of a Warden for Nurses Hostels in all the big hospitals in the State and a Directress of Physical Training for student nurses etc., in three big hospitals of Madras City was introduced during the year under review.

Two Nurses were deputed to the All India Institute of Mental Health, Bangalore for the Diploma in Psychiatric Nursing, who returned after completion. One Nurse was sent to the All India Institute of Hygiene and Public Health, Calcutta for the Public Health Nursing Course. One Nurse participated in Paediatrics Nursing Refresher Course for Head Nurse.

Punjab : There was some improvement in conditions of nursing services. Non-pensionable posts were converted into pensionable posts and nurses recruited on contract basis were given the option of availing of new pension rules. The State Government grants two scholarships each year for two students for studying B.Sc. (Hons.) in Nursing at College of Nursing, New Delhi. The State Government has asked for the services of a W.H.O. Nursing Adviser for improving the nursing services and education in the State and it is proposed to appoint a counterpart of the Nursing Adviser designated as Assistant Director of Health Services (Nursing). A Sister Tutor was deputed for training in Nursing Administration in Australia on a Colombo Plan scholarship. A new training school for Nurses was started at Patiala. Two refresher courses for Nurses were held in the State with UNICEF assistance. A provision of ten lakhs was suggested in the Third Five Year Plan period for starting nurses training at five more centres. A hostel for 250 Nurses was under construction at a cost of two lakhs at the V. J. Hospital, Amritsar.

Rajasthan : The shortage of trained nurses persisted in this State during the year under review. There were 3 centres for training Nurses, 7 for Auxiliary Nurse-Midwives and 19 centres for Dais. A proposal for the formation of Rajasthan Nursing Council was under active consideration of the State Government. A post of Superintendent of Nursing Services was created with a pay scale of Rs. 500-900 but could not be filled. Adequate hostel accommodation was not available in the hospitals and a considerable budget was provided in the year 1959-60 for the construction of more staff quarters. The Public Health Orientation Training for Nurses was continued at Zanana Hospital, Jaipur. Proposal for increasing Auxiliary Nurse-Midwives Training Centres were under active consideration of the State Government.

Uttar Pradesh : There was a shortage of trained Nurses in this State. All the sanctioned posts could not be filled. The nursing services in general were satisfactory. Steps were taken for increasing the number of students Nurses by admitting more candidates in Training Schools for Nurses and Auxiliary Nurse-Midwives during the year under report.

West Bengal : Expansion of health services continued during the year under report and efforts were continued to fill up the vacant post of trained nurses. Against a sanctioned strength of 4,302 posts for trained staff in Government Hospitals; 1,627 trained Nurses (including 628 Auxiliary Nurse-Midwives and 1,017 fully trained Nurses), 1,077 untrained Nurses and 1,475 student Nurses were in service. Due to better service conditions available in the State, a greater number of trained nurses were available for services than in the previous years. The Public Health Orientation training continued in Singur for trained nurses in order to prepare them for rural and urban public health work.

Out of the budget allocation of Rs. 2,80,000, the actual expenditure for nursing services was Rs. 2,30,739. A grant of Rs. 25,000 was paid to Islamia Hospital and Rs. 7,500 to Charteris Hospital, Kalimpong for training. The scheme of nationalisation of nursing services in the State provided many financial and service benefits to a larger number of Nurses, who became eligible for greater emoluments with retrospective effect. Many Nurses got promotions to higher grades through departmental examinations. A larger

number of Sister Tutors were available for teaching. The designation of Dais was changed to Sevikas and they also were given certain benefits under rationalisation scheme.

Hostel accommodation was not adequate in the hospitals. More quarters were under construction at Midnapur and some other hospitals. New hostels were completed in the District of Burdwan and Bankura etc. Better educated women were coming forward in greater numbers for nursing training. A new training school for Auxiliary Nurse-Midwives was opened. One Nurse was sent for Sister Tutor Course on Government scholarship. Another was sent for Master in Nursing at Nursing College, New Delhi. Seven Sister Tutors were deputed for a refresher course in Public Health. Two Nurses returned after training in Nursing Administration, three in Sister Tutors course and six Nurses were trained in Public Health Nursing. All the three Nurses were given appropriate posting. Three Nurses went to U. K. on their own expenditure for training in Nursing of Plastic Surgery.

The State Government took over R. G. Kar Hospital, Calcutta and larger number of trained Nurses were posted to this hospital to increase the nursing staff there. A Sister Tutor was also appointed in this hospital.

Delhi : The shortage of trained staff nurses persisted. The sanctioned number of posts could not be filled up. Adequate accomodation for the residence of students was available in the Irwin Hospital. Three Ward Sisters were deputed for Ward Sister Course at College of Nursing, New Delhi.

Himachal Pradesh : There was a shortage of nursing staff in general because suitably qualified and educated girls were not available for nursing training in this territory. The scales of pay for nursing staff were revised and improved to bring them at par with Punjab Government scales. Adequate hostel accommodation was available. A provision was made for the post of one Deputy Assistant Director (Nursing) during Third Five Year Plan period. Steps were taken to popularise nursing training amongst better class of girls. The standard of nursing education was improved. One Public Health Nurse from Himachal Pradesh was trained at Calcutta and another Nurse completed Sister Tutors Course at Delhi.

Laccadive, Minicoy and Amindive Islands : The nursing staff, except eight midwives for seven local dispensaries, had worked in these Islands. There was also no hospital in this territory.

Manipur : There was gradual improvement in the nursing services. Hostel accommodation was inadequate, but the construction scheme for new quarters was prepared. Two Nurses returned after completing B.Sc. Course in Nursing. All the sanctioned posts could not be filled due to non-availability of the qualified nursing staff.

Pondicherry : There was no improvement in nursing services. Efforts were made to open a Nursing School with a batch of fifty students, but it could not be opened during the year under report due to non-availability of trained staff. Hostel accommodation was inadequate but sanction for additional quarters construction was received.

Tripura : The number of existing trained nurses was not adequate to cater to the needs of the Hospitals and Primary Health Centres under the Territorial Council of this territory. Adequate hostel accommodation was available for the trained staff. Twelve Nurses were deputed for taking the Orientation Course in Public Health Nursing at the Singur Health Unit (West Bengal). One Nurse returned after passing the B.Sc. Course in Nursing.

CHAPTER VIII

CHAPTER VIII

(i) Medical Education and Registration

With the advent of independence, the people of India have begun to appreciate the necessity for creation of better preventive and curative services in the country. The necessity or rapid expansion of medical education to increase the output of qualified doctors and other para-medical personnel was felt to be of paramount importance. The number of medical colleges had increased during the last 12 years after the Bhore Committee's report from 19 to 55 by the end of 1959. The State-wise distribution of students admitted and passed to and from different Medical Colleges in India during 1959 is shown in Table Nos. 58 and 59 respectively. There is a provision of Rs. 6·5 crores in the Second Five Year Plan for establishment of new Medical Colleges and expansion of existing ones. The Government of India agreed to offer financial help for the expansion of the Medical Colleges at Dibrugarh, Guntur, Trivandrum, Madurai, Mysore, Cuttack, Gwalior, Indore, Agra, Leheria-Serai, Jaipur and Amritsar.

A provision of Rs. 25 lakhs was made in the Second Five Year Plan period for up-grading of certain Departments in Medical Colleges and Research Institutions in the country and to impart post-graduate training to selected doctors to make them fit for teaching and research work and a provision of Rs. 6 lakhs was available during the year under review. Deserving students admitted to the up-graded institutions approved by the Government of India were provided with stipends at the rate of Rs. 150 to Rs. 250 per month according to the qualifications of the scholars and the subjects of study. Although the scheme started in 1948, the facilities provided for courses of training in up-graded departments of 12 institutions are as shown below :—

Courses of Training	Name of the up-graded departments
1. D.G.O., M.D. Midwifery, M.S. (Gynaecology).	Institute of Obstetrics and Gynaecology, Government Hospital for Women and Children, Madras.
2. D. V.	Institute of Venereology, Government General Hospital, Madras.
3. M.Sc., and Ph.D. in Anatomy . .	Institute of Anatomy, Stanley Medical College, Madras.
4. D.R., C.R.A., and D.R.A. . . .	Barnard Institute of Radiology, Government General Hospital, Madras.
5. D.C.H.	Institute of Paediatrics, Madras Medical College, Madras.
6. M.D. (in Pathology and Bacteriology) .	Department of Pathology, Andhra Medical College, Visakhapatnam.

Courses of Training	Name of the up-graded departments
7. Research Work	Department of History of Medicine, Osmania Medical College, Hyderabad.
8. Plastic and Maxillofacial Surgery . .	Department of Plastic and Maxillofacial Surgery, Medical College, Nagpur.
9. D.P.M., D.M.P. and D.P.N. . .	All India Institute of Mental Health, Bangalore.
10. Research in Clinical Work on Cancer .	Indian Cancer Research Centre, Bombay
11. D.T.D., and Research in T.B. . .	Vallabhabhai Patel Chest Institute, Delhi
12. Thoracic Surgery	Thoracic Surgery Unit, Christian Medical College, Vellore (Madras).

The total number of candidates, who were selected for training facilities offered in the up-graded department during 1959-60, was 136 as against 89 during 1958-59.

During the year under review, the Government of India constituted a Post-graduate Medical Education Assessment Committee in order to assess the existing facilities for post-graduate medical education and to formulate recommendations for future plans of development of post-graduate medical education in the country.

Post-graduate Training Courses in Delhi Hospitals :

The Government of India sanctioned in 1958 a scheme for post-graduate teaching in Medicine (18 seats), Pathology (1 seat), Mid-wifery (6 seats), Surgery (17 seats), Anatomy (1 seat), Physiology (1 seat), Medical Bio-chemistry (1 seat) and D.T.C.D. (10 seats) to be conducted in Government Hospitals in Delhi *viz.*, the Irwin, the Willingdon, the Safdarjang and the Lady Hardinge Medical College Hospitals, New Delhi. Although 55 stipends for these courses at the rate of Rs. 150 per month were sanctioned, only 33 candidates joined the training courses during the year under report.

Establishment of Department of Preventive and Social Medicine in Medical Colleges :

Social and Preventive Medicine has lately been introduced in the Medical Colleges' curriculum. During 1954-55, the Government of India decided to establish Departments of Social and Preventive Medicine in Medical Colleges in India. The project was also assisted by the World Health Organisation in developing such departments by providing W.H.O. programme to be assigned to the Medical Colleges approved by the Government of India. A provision of Rs. 25 lakhs was made in the Second Five Year Plan for the scheme out of which there was a provision of Rs. 6·50 lakhs available during 1959-60. The Medical Colleges at Nagpur, Dibrugarh, Gwalior, Visakhapatnam, Trivandrum, Laheria-sarai, Cuttack, Jaipur, Calcutta, Madras, Lucknow, Guntur, Amritsar, Patiala, Baroda, Bombay, Poona and Ahmedabad have so far been approved for the

establishment and strengthening of the Departments of Preventive and Social Medicine with Central assistance.

Paediatric Centres :

In order to improve paediatric training, so that medical personnel can receive adequate instruction in paediatric during their training period and thus may be better equipped to play their role in Child Health Services, the Government of India in the Ministry of Health provided a sum of Rs. 35 lakhs in the Second Five Year Plan period to assist the various Medical Colleges in the country.

The establishment of Paediatric Centres in Andhra Pradesh (2 centres) Kerala (2 centres) and Bombay (1 centre) had so far been sanctioned. The Government of Assam had also applied for Central assistance under this Scheme.

(ii) Medical Council of India, New Delhi

The Indian Medical Council celebrated its Silver Jubillee in February, 1959 and on this occasion sectional seminars on various post-graduate specialities were organised. To commemorate the Silver Jubillee the Council instituted its Silver Jubillee Research Award for granting annually an award to those research workers in India as judged to be the best and original in the field of medicine, pharmaceutical and allied sciences which would be beneficial for the greater good and for the humanity at large. It was approved during the year under report that the procedure regarding the disposal of the case of recognition and registration of non-scheduled medical qualifications under Section 14 of the Indian Medical Council Act, 1956 and that of non-scheduled foreign medical qualifications under Section 13 (iv) of the Indian Medical Council Act, 1956 in future all such applications be forwarded through the Central Government.

The Indian Medical Council was constituted under the Indian Medical Council Act with the object of establishing a uniform standard of higher qualifications in medicines for all States. The existing Council will be replaced by a new Council as soon as it is constituted under the Indian Medical Council Act, 1956, which has been brought into force with effect from 1st November, 1958. Till then, the Council constituted under the Act of 1933 with addition of 7 licentiate members nominated thereto by the Central Government shall be deemed to be the Council constituted under the Act of 1956. The Government have nominated seven licentiate members in consultation with the All-India Medical Licentiate Association. The Government have decided to form the Council under the new Act by the 1st April, 1959 and have already taken steps in this direction.

46 members, including seven licentiates nominated by the Central Government, were the members of the Medical Council of India in 1959 and seven members were in the Executive Committee and two meetings of the Council were held during the year under report. No changes were made in the recommendations of the Council on professional education or with regard to the preliminary educational qualification required for admission to the courses for the medical degrees.

An up-to-date copy each of the First and Second Schedule and Part I and Part II of the Third Schedule of the Indian Medical Council Act, 1956,

relating to the year 1959, is shown in Appendix B, C, D and E reproduced below:—

APPENDIX 'B'

THE THIRD SCHEDULE

Recognised Medical Qualifications granted by Universities of Medical Institutions in India.

University of Medical Institutions	Recognised Medical Qualification	Abbreviation for Registration
1	2	3
University of Allahabad	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Allahabad
University of Agra .	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Agra
University of Andhra .	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Andhra
	Doctor of Medicine . .	M.D. Andhra
	Master of Surgery . .	M.S. Andhra
	Licentiate in Medicine and Surgery.	L.M.S. Andhra
	Diploma in Laryngology and Otology.	D.L.O. Andhra
	Master of Surgery (General Surgery).	M.S. (Genl. Surg.) Andhra
	Master of Surgery (Orthopaedics).	M.S. (Ortho). Andhra
	Diploma in Venereal Diseases	D.V.D. Andhra
University of Aligarh	Diploma in Ophthalmology	D.O. Aligarh "This qualification shall be a recognised medical qualification under this Schedule only when it is held by persons holding any other medical qualification specified in this Schedule".
University of Baroda .	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Baroda
	Doctor of Medicine . .	M.D. (Med.) Baroda
	Master of Surgery . .	M.S. (Surg.) Baroda
University of Bombay	Licentiate in Medicine and Surgery.	L.M.S. Bombay
	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Bombay

1	2	3
University of Bombay	Doctor of Medicine . .	M.D. Bombay
	Master of Surgery . .	M.S. Bombay
	Diploma in Anaesthesiology	D.A. Bombay
University of Bihar .	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Bihar
University of Calcutta	Licentiate in Medcine and Surgery.	L.M.S. Calcutta
	Bachelor of Medicine . .	M.B. Calcutta
	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Calcutta
	Doctor of Medicine . .	M.D. Calcutta
	Master of Surgery . .	M.S. Calcutta
	Master of Obstetrics . .	M.O. Calcutta
	Diploma in Ophthalmic Medicine and Surgery.	D.O.M.S. Calcutta
	Diploma in Gynaecology and Obstetrics.	D.G.O. Calcutta
College of Physicians and Surgeons of Bombay	Membership of College of Physicians and Surgeons, Bombay.	M.C.P.S. Bombay "This qualification shall be a recognised medical qualification only when granted after the 30th April, 1944.
	Fellowship of College of Physicians and Surgeons, Bombay in Medicine, Pathology, Surgery or Dermatology	F.C.P.S. (Med.) Bombay F.C.P.S. (Path.) Bombay F.C.P.S. (Surg.) Bombay F.C.P.S. (Derm.) Bombay "These qualifications shall be recognised medical qualifications only when granted after the 1st April, 1954."
	Fellowships of the College of Physicians and Surgeons, Bombay in Midwifery and Gynaecology, Ophthalmology and Diplomas of the said College in Pathology, Bacteriology, Gynaecology and Obstetrics and Child Health.	F.C.P.S. (Mid.& Gyn.) F.C.P.S. (Ophth.) D.P.B. (Dip. in Path and Bact.) D.G.O. (Dip. in Gyn. & Obsts.) D.C.H. (Dip. in Child Health). "These qualifications shall be recognised medical qualifications under this Schedule only when they are held by persons holding any other medical qualification specified in this Schedule."

1	2	3
University of Delhi .	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Delhi
	Diploma in Tuberculosis Diseases.	D.T.D. Delhi
University of Gauhati	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Gauhati
University of Gujarat	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Gujarat
University of Karnatak	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Karnatak
University of Kerala .	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Kerala
University of Lucknow	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Lucknow
	Doctor of Medicine . .	M.D. Lucknow
	Master of Surgery . .	M.S. Lucknow
University of Madras .	Licentiate in Medicine and Surgery.	L.M.S. Madras
	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Madras
	Bachelor of Medicine and Master of Surgery.	M.B., M.S Madras
	Doctor of Medicine . .	M.D. Madras
	Master of Surgery . .	M.S. Madras
University of Mysore .	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Mysore
		"This qualification shall be a recognised qualification only when granted after the 31st December, 1932".
University of Nagpur .	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Nagpur
University of Osmania	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Osmania
University of East Punjab.	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. East Punjab
East Punjab State Medical Faculty.	Licentiate in Medicine and Surgery.	L.M.S. East Punjab
		"This qualification shall be recognised after the 15th August, 1947 provided the holders thereof had passed the F.Sc. examination before taking up medical studies".

1	2	3
University of Patna .	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Patna
	Doctor of Medicine . .	M.D. Patna
	Master of Surgery . .	M.S. Patna
University of Poona .	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Poona
University of Rajputana	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Rajputana
	Master of Surgery in General Surgery.	M.S. (Genl. Surg.) Rajputana
	Doctor of Medicine in Medicine and Therapeutics.	M.D. (Med. & Thera.) Rajputana
	Doctor of Medicine in Pathology.	M.D. (Path.) Rajputana
	Master of Science in Physiology.	M.Sc., (Physiology) Rajputana
	Master of Science in Medical Pharmacology.	M.Sc., (Med. Pharm.) Rajputana
University of Rajasthan	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Rajasthan
	Master of Surgery in General Surgery.	M.S. (Gen. Surg.) Rajasthan
	Doctor of Medicine in Medicine and Therapeutics.	M.D. (Med. & Thera.) Rajasthan
	Doctor of Medicine in Pathology.	M.D.(Path.) Rajasthan
	Master of Science in Physiology.	M.Sc. (Physiolology) Rajasthan "These qualifications shall be recognised medical qualifications only when granted on or after the 1st July, 1957".
	Master of Science in Medicine and Pharmacology.	M.Sc. (Medicine & Pharmacology) Rajasthan. "This qualification shall be a recognised medical qualification only when granted on or after the 1st July 1957".
University of Travancore.	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Travancore
State Medical Faculty of West Bengal.	Membership of the State Medical Faculty of West Bengal.	M.M.F. West Bengal
University of Utkal .	Bachelor of Medicine and Bachelor of Surgery.	M.B., B.S. Utkal

APPENDIX 'C'

INDIAN MEDICAL COUNCIL ACT, 1956

THE SECOND SCHEDULE

Recognised medical qualifications granted by medical institutions outside the Provinces.

Country	Qualifications
United Kingdom . . .	Registrable qualifications admitting primarily to the Medical Register granted by licensing bodies in the United Kingdom, as shown in Table "E" set out in the Medical Register printed and published from time to time under the direction of the General Medical Councilin pursuance of the Medical Acts, 1858, 1886 and 1950.

Other Countries	Registrable Qualifications		
	Title	Nature of qualification as stated on diplomas	Abbreviations
1	2	3	4
AUSTRALIA			
New South Wales			
University of Sydney (c)	M.B. M.D. Ch.M., B.S.	Medicine & Surgery	U. Sydney
South Australia			
University of Adelaide (a) (c)	M.B., B.S. M.D. M.S.	—Do—	U. Adelaide
Victoria			
University of Melbourne	M.B. M.D., B.S. M.S.	—Do—	U. Melbourne
BURMA			
University of Rangoon .	M.B., B.S.	—Do—	U. Rangoon
CANADA			
Alberta			
College of Physicians and Surgeons of the Province of Alberta (b)	Member	—Do—	C. P. and S. Alta
University of Alberta (b)	M.D.	—Do—	U. Alberta
Manitoba			
College of Physicians and Surgeons of the Province of Maintoba (b)		Medicine and Surgery	C.P. & S. Man
University of Mantioba (c)	M.D., M.D., C.M.	—Do—	U. Man

1	2	3	4
North-West Territories			
College of Physicians and Surgeons of the Province of North-West Territories (b) (When held in conjunction with Licence of the College of Physicians and Surgeons of the Province of Saskatchewan or the Province of Alberta).	Member	Medicine and Surgery	C.P. & S.N.W. Terr.
Nova Scotia			
Nova Scotia Provincial Medical Board (a) (c).	L.M.S.	—Do—	N. Scotia P.M. Bd'
Dalhousie University(a) (c)	M.D., C.M.	—Do—	Dalhousie. U.
Prince Edward Island			
Prince Edward Island Medical Council (b).	L.M.S.	—Do—	M.Co. P.E.T.
CEYLON			
Ceylon Medical College (a) (c)	L.M.S.	—Do—	Ceylon M. Coll.
HONG KONG			
University of Hong Kong (a) (c)	M.B., B.S. M.D., M.S.	—Do—	U. Hong Kong.
ITALY			
All Royal Atalia Universities (d)	M.D.	—Do—	
JAPAN			
All Imperial Universities (e)	M.B. (Igakushi) M.D. (Igaku Hakushi).	—Do—	
Any Government or Prefectural special Colleges designated by a Minister of Education of Japan (c)	M.B. (Igakushi)	— Do—	
Malta			
Royal University of Malta	M.D.	Medicine and Surgery	U. Malta
NEW FOUNDLAND			
New Foundland Medical Board (b).	L.M.S.		Medicine and Nffd. M. Bd. Surgery.
NEW ZEALAND			
University of New Zealand	M.B., Ch. B. Ch.M., M.D.	—Do—	U. N. Zealand

1	2	3	4
PAKISTAN			
Punjab University . .	L.M.S., D. M.B.,M.S. M.B., B.S.	Medicine and Surgery	U. West Punjab
Punjab State Medical Faculty (f).	L.M.S.	Licentiate in Medicine & Surgery.	L. M. S. Punjab
PONDICHERRY			
Medical School, Pondicherry.	Medicine de L Ecole de Pondicherry (Diploma)		
UNION OF SOUTH AFRICA			
University of South Africa (b).	M.B., Ch. B.	Medicine and Surgery	U.S. Africa
University of Cape Town (a) (c).	M.B., Ch. B. M.D., Ch. M.	—Do—	U. Cape Town
University of the Witwatersrand Johannesburg (a) (c)	M.B., Ch. B. M.D., Ch. M.	—Do—	U. Witwatersrand
STRAITS SETTLEMENTS AND FEDERATED MALAYA STATES			
The King Edward VII College of Medicine, Singapore (a) (c).	L.M.S.	Medicine and Surgery.	Singapore Med. College.

Note :—

(a) The qualification must be included in Table (F) of the British Medical Register as published from time to time by the General Council of Medical Education and Registration of the United Kingdom.

(b) When granted on or before the 31st October, 1937.

(c) When granted on or before the 31st March, 1942.

(d) When granted on or before the 10th October, 1940.

(e) When granted on or before the 8th December, 1941.

(f) This qualification shall be a recognised one only when granted before the 15th August, 1947, provided the holders thereof had passed F.Sc. examination before taking up medical studies.

APPENDIX 'D'

INDIAN MEDICAL COUNCIL ACT, 1956

THE THIRD SCHEDULE

(*See* Section 13)

Part I

Recognised Medical Qualifications granted by Medical Institutions not included in the First Schedule.

Name of Medical Institution or Licensing Authority	Recognised medical qualification	Abbreviations
1	2	3
College of Physicians and Surgeons of Bombay.	Licentiate of the College of Physicians and Surgeons, Bombay.	L.C.P.S. (Bom.)
	*Fellowships of the College of Physicians and Surgeons, Bombay in Midwifery and Gynaecology, Ophthalmology and Diplomas of the said College in Pathology and Bacteriology, Gynaecology and Obstetrics and Child Health.	F.C.P.S.(Mid. & Gyn.) F.C.P.S. (Opthl.), D.P.B. (Dip. in Path.) & Bact.) D. G. O. (Dip. in Gyn. & Obst.) D.C.H. (Dip. in Child Health).
State Medical Faculty, Bombay.	Licensed Medical Practitioner.	L.M.P. (Bom.)
State Medical Faculty of Bengal.	@Licentiate of Medical Faculty, Bengal	L.M.F. (Bengal)
State Medical Faculty of West Bengal.	Licentiate of the Medical Faculty, West Bengal Licentiate in Medicine & Surgery (Nat.) (West Bengal),	L.M.F. (W. Bengal). L.M. & S. (Nat.) (West Bengal).
	Certificate of qualification by the State Medical Faculty under Article 6-C of the Statutes of the State Medical Faculty, West Bengal.	Certificate under Article 6-C (W.B.)
	Certificate and qualification by the State Medical Faculty under Article 6-D or 6-E of the Statutes of the State Medical Faculty, West Bengal.	Certificate under Article 6-D or 6-E (W.B.)
Government of Bengal .	Licensed Medical Practitioner (Campbell Medical School).	L.M.P. (Campbell Medical School).
	Diploma of Medical College (Bengal).	Dip. Med. Coll. (Bengal).

Note :—

*These qualifications shall be recognised qualifications under this Schedule only when they are held by persons holding any other medical qualification specified in this Schedule.

@This qualification shall be a recognised medical qualification only when granted before the 15th August, 1947.

1	2	3
Government of Bengal .	*Licensed Medical Practitioner (Dacca Medical School).	L.M.P. (Dacca Medical School).
State Medical Faculty of Uttar Pradesh.	Fellow of the State Medical Faculty (U.P.)	F.S.M.F. (U.P.)
	Member of the State Medical Faculty.	M.S.M.F. (U.P.)
	Licentiate of the State Medical Faculty.	L.S.M.F. (U.P.)
State Board of Medical Examination, U.P.	Licensed Medical Practitioner (U.P.) .	L.M.P. (U.P.)
East Punjab State Medical Faculty.	@Licentiate in Medicine and Surgery	L.M.S., East Punjab.
State Medical Faculty of Punjab.	Fellow of the State Medical Faculty (Punjab).	F.S.M.F. (Punjab)
	Member of the State Medical Faculty (Punjab).	M.S.M.F. (Punjab)
	Licentiate of the State Medical Faculty	L.S.M.F. (Punjab)
Government of Punjab .	ΔLicensed Medical Practitioner (Lahore)	M.P.L. (Lahore)
Hyderabad Government	Licentiate in Medicine and Surgery (Osmania).	L.M. & S. (Osmania)
	Licensed Medical Practitioner	L.M.P. (Hyderabad)
Government of Mysore .	Licensed Medical Practitioner (Mysore)	L.M.P (Mysore)
Mysore Medical School .	Licensed Medical Practitioner (Mysore Medical School)	L.M.P. (Mysore Medical School)
Andhra University .	Licentiate in Medicine and Surgery (Andhra University).	L.M. & S. (Andhra U.)
Assam Medical Examination Board	Licensed Medical Practitioner (Assam).	L.M.P. (Assam).
	Licensed Medical Practitioner (B.W. Medical School, Dibrugarh).	L.M.P. B.W. Medical School, Dibrugarh).
Board of Examiners, Medical College, Madras.	Licensed Medical Practitioner (Madras)	L.M.P. (Madras)
	Diploma in Medicine and Surgery.	D.M.S. (Madras)
		Lic. Apoth. (Madras)
C. P. (or M.P.) Medical Examination Board.	Licensed Medical Practitioner (C.P. or M.P.)	L.M.P. (C.P. or M.P.)

NOTE:—

*This qualification shall be recognised medical qualification only when granted before the 15th August, 1947.

@This qualification shall be a recognised one only when granted on or after the 15th August, 1947 to a person other than any person referred to in the entry relating to East Punjab State Medical Faculty in the First Schedule, provided he had passed the premedical examination.

ΔThis shall be a recognised medical qualification only when granted before the 15th August, 1947.

1	2	3
Orissa Medical Examination Board.	Licensed Medical Practitioner (Orissa).	L.M.P. (Orissa).
Bihar and Orissa Medical Examination Board.	Licensed Medical Practitioner (Bihar & Orissa) Licensed Medical practitioner (Temple Medical School, Patna).	L.M.P. (Temple Medical School, Patna).
King Edward Hospital Medical School, Indore.	Diploma or Certificate in Medicine and/or Surgery.	Diploma or certificate in Medicine and/or Surgery.
Travancore University .	—Do—	—Do—
Rangoon University .	*Licentiate in Medicine and Surgery .	L.M. & S. (Rangoon U.)
Burma Medical Examination Board.	@Licensed Medical Practitioner .	L.M.P. (Burma).
Aligarh University .	ΔDiploma in Ophthalmology . .	D. O. (Dip. in Ophthalmology) (Aligarh University)

Note :—

*This qualification shall be a recognised medical qualification only when granted before the 1st April, 1937.

@This qualification shall be a recognised medical qualification only when granted before the 1st April, 1937.

ΔThis qualification shall be a recognised medical qualification under this Schedule only when held by persons holding any other medical qualification specified in this schedule.

APPENDIX 'E'

INDIAN MEDICAL COUNCIL

THE THIRD SCHEDULE

Part II

Recognised Medical Qualifications granted by Medical Institutions outside India not included in the Second Schedule.

M. D. (Berlin)

M. D. (Paris)

M. D. (Amsterdam)

M. D. (Freiburg, Germany)

M. D. (Vienna)

M. D. (Toronto, Canada)

M. D. (Heidelburg)

M.B.B.S. (Dacca)

M. D. (Bonn) (Specialist for Women's diseases and Obstetrics).

M.B.B.S. (Ceylon)

M. D. (Munich)

Licentiate diploma awarded by the Medico-Surgical College of Nova-Goa.

(a) The following medical qualifications were included in the First Schedule to the Indian Medical Council Act, 1956 during the year 1959:—

D.A. (Diploma in Anaesthesia) . . .	Bombay University.
D.O.M.S. (Dip. in Ophthalmic Medicine & Surgery).	Calcutta University.
D.L.O. (Dip. in Laryngology & Otology) .	Andhra University.
M.S. (General Surgery)	Andhra University.
M.S. (Orthopaedics)	Andhra University.
D.V.D. (Dip. in Venereal Diseases) . .	Andhra University.
D.T.D. (Diploma in Tuberculosis) . .	Delhi University.
M.S. (General Surgery)	Rajputana University.
M.D. (Medical & Therapy)	Rajputana University.
M.D. (Path. & Bact.).	Rajputana University.
M.Sc. (Physiology)	Rajputana University.
M.Sc. (Med. Pharmacology) . . .	Rajputana University.
M.B.B.S. (Bachelor of Medicine & Bachelor of Surgery).	Rajputana University.
M.S. (General Surgery)	Rajputana University.
M.D. (Med. Thera.)	Rajputana University.
M.D. (Pathology & Bact.)	Rajputana University.
M.Sc. (Phys.)	Rajputana University.
M.S. (Medical Pharmacology) . . .	Rajputana University.

M.B.B.S.	Kerala University.
M.B.B.S.	Travancore University.
D.G.O. (Diploma in Gyn. & Obst.)	Calcutta University.
F.C.P.S. (Mid. & Gyn.)	Fellowships of the Colleges of Physicians and Surgeons Bombay in Midwifery & Gynaecology, Ophthalmology Diplomas of the said College in Pathology and Bacteriology, Gynaecology & Obstetrics & Child Health.
F.C.P.S. (Opth.)	
D.P.B. (Dip. in Path & Bact.)	
D.C.H. (Dip. in Child Health)	
D.O. (Diploma in Ophthalmology)	Aligarh University.

(b) The qualifications regarding Licentiate Diploma awarded by the Medico-Surgical College of Nova-Goa was included in Part II of the Third Schedule to the Indian Medical Council Act, 1956.

During the year 1959, the Council recommended the following qualifications for inclusion in the first schedule to the Indian Medical Council Act, 1956 to the Central Government in respect of the Colleges noted against each:—

M.D. (Pathology) (Medical Collage, Baroda)	Baroda University.
D.L.O. —do—	—do—
D.O.M.S. (Medical College, Agra)	Agra University.
M.S. (General Surgery), B. J. Medical College, Ahmedabad	Gujarat University.
M.S. (ENT). (Andhra Medical College, Visakhapatnam)	Andhra University.
M.D. (Tuberculosis), (T.N. Seth G. S. and Grant Medical College, Bombay)	Bombay University.
M.B.B.S. (M.G.M. Medical College and G.R. Medical College, Gwalior)	Vikram University.
M.D. (Pharmacology) —do—	—do—
M.D. (Pathology) —do—	—do—
M.D. (Medicine) —do—	—do—
M.D. (Physiology) —do—	—do—
M.S. (Ophthalmology) —do—	—do—
M.S. (General Surgery) —do—	—do—
M.S. (Anatomy) —do—	—do—
M.S. (Obst. Gyn.) —do—	—do—
T.D.D. —do—	—do—
D.C.H. —do—	—do—
D.M.R.E. —do—	—do—
D. Orth. (Diploma in Orthopaedics) (K.G. Medical College, Lucknow).	Lucknow University.
D.T.D. (Diploma in Tuberculosis) (K.G. Medical College, Lucknow.)	—do—

(b) (i) The Council approved the Medical College, Patiala, the Christian Medical College, Ludhiana and Guntur Medical College, Guntur for the training of under-graduate students and for the award of M.B.B.S. Degree of Punjab University for the former two and of Andhra University for the latter College, already included in the first schedule to the Indian Medical Council Act, 1956 to the students trained at these Medical Colleges.

Under-Graduate Inspections :

During the year under review the inspections were carried out by the Council at the following centres :—

1. Madras (Madras, Stanley, Vellore and Madurai Medical Colleges).
2. Baroda (Medical College, Baroda).
3. Gujarat (M. P. Shah Medical College, Jamnagar and B. J. Medical College, Ahmedabad).
4. Andhra (Andhra Medical College, Visakhapatnam and Medical College, Guntur).
5. Calcutta (Calcutta, Nilratan Sircar, R. G. Kar Medical Colleges and Calcutta National Medical Institute, Calcutta).

Visitations :

1. Medical College, Nagpur for additional facilities in respect of students of Medical College, Aurangabad (Marathwada University).
2. Medical College, Kakinada (Andhra University)
3. M. P. Shah Medical College, Jamnagar (Gujarat University)
4. Guntur Medical College, Guntur (Andhra University)
5. Gandhi Medical College, Hyderabad (Osmania University)
6. Karnatak Medical College, Hubli (Karnatak University)
7. Medical College, Calicut (Kerala University)
8. Medical College, Aurangabad (Marathwada University)
9. Christian Medical College, Ludhiana (Punjab University)
10. Government Medical College, Patiala (Punjab University)

Post-Graduate Visitations :

The Council carried out the periodical inspections in respect of the Post-Graduate Courses in Baroda University for Diploma in Anaesthesia in the Medical College, Baroda, Punjab University for M.S. (Anaesthesia), D.T.D. in the Medical College, Amritsar and in the Poona University for D.P.H. in B. J. Medical College, Poona and in Bihar University for M.D. (Pathology) in the Darbhanga Medical College, Leheria-Sarai. The *post-graduate visitations* were carried out in Baroda University for M. D. (Pathology) and D.L.O. in the Medical College, Baroda. In Gujarat University for M. S. (General Surgery as well as Ophthalmology) from B. J. Medical College, Ahmedabad.

Reciprocity :

As regards the progress of reciprocity in the matters of recognition of foreign qualifications, the General Medical Council of U. K. recognised M.C.P.S. (Bombay) with effect from 30th April, 1944 granted to students trained at B. J. Medical College, Poona and B. J. Medical College, Ahmedabad also. The M.B.B.S. Degrees of Delhi, Poona and Gujarat and Bihar were also recognised by that Council with effect from the date of their inception.

The General Medical Council of U. K. also recognised M.B.B.S. degree granted by the Osmania University after 15th August, 1951 to students trained at Osmania Medical College, Hyderabad.

The Central Government accepted the following amendments in regulations No. 39 of the Regulations of the Medical Council of India as suggested by the Council :—

"39. The 10 members of the Executive Committee elected by the Council under section 10(1) of the Act shall be elected by all members of the Council present voting together, in the proportion of 4 members from amongst University representatives, 3 members from amongst nominated members, 2 members from amongst representatives of registered graduates and one member from the licentiate group".

During the year under report the Council appointed a Sub-Committee to look into the question of revision of the under-graduate medical curriculum. The Council also appointed a Sub-Committee consisting of Lt. Col. Amir Chand and Dr. S. K. Menon to scrutinise preliminary cases of registration under sections 13 and 14 of the Indian Medical Council Act, 1956 and matter connected therewith for consideration of authorities.

During 1959 no institution of the licentiates standard should be allowed to exist and the council desired that the persons who have already obtained the D.M.P. qualifications and whose qualifications were recognised by Vidarbha Medical Council also those who had not completed the D.M.P. course and who were allowed to continue D.M.P. course provided no further admissions were made in the Robertson Medical School, Nagpur, may be asked to undergo a further training of two years and also to be asked to appear at an examination conducted by the Central Government. If they were successful in such examination they might be regarded to possess the qualification equivalent to L.M.P. and included in Part I of the Third Schedule to the Indian Medical Council Act, 1956. Nature of the training to be given and the subjects in which they would be examined would be decided by the Executive Committee of this Council after the general principles had been approved.

The Executive Committee adopted a resolution that while selecting the candidates for admission to Medical Colleges they will introduce a system of undertaking from students that they shall serve for a period of three years in rural areas on a scale of rupees remuneration commensurate with their qualification and that this resoultion be circulated to the Colleges, Universities and State Governments for their views on the matter.

The Executive Committee accepted the recommendations of the Sub-Committee that 45 per cent marks obtained at the Intermediate Examination in science should be the minimum required for admission to the Medical Colleges, except in case of Scheduled Castes and Scheduled Tribes.

State Activities : In addition to the activities of the Central Government and of the Medical Council of India towards rapid expansion of the medical education in the country, the activities of the State Governments in this matter were also in no way less during the year 1959. The details of the activities of the States in this connection are summarised below:—

Andhra Pradesh : There were seven Medical Colleges functioning in the State during 1959 of which the Regional Medical College, Warrangal under the Osmania University, was opened during 1959. The Department of Medicine in K. G. Hospital, Visakhapatnam was amply sufficient for the training of under-graduate as well as the post-graduate students. The Department of Pathology was up-graded under the Government of India which

provided an excellent pathology museum. The Department of Medicine had all its requirements for being up-graded as it had all its ancillary departments viz., Anatomy, Physiology, Pharmacology, Bio-chemistry, Pathology, Bacteriology and Social and Preventive Medicine. Six students in the post-graduate course of T.D.D. were admitted and six qualified during the year under report.

Assam : One Medical College with 100 students imparted medical education in the State during the year 1959. There was no facility for post-graduate training in this State. Training in Pharmacy was being given in the B. W. Medical School, Dibrugarh. Training in Sanitary Inspectorship was conducted at Chabua Health Centre attached to the Department of Social and Preventive Medicine of the Assam Medical College, Dibrugarh. The Assam Medical College as well as some other missionary hospitals imparted training in Nursing and Mid-wifery apart from the training in various other hospitals.

In Assam due to the dearth of doctors, unqualified medical practitioners were being registered subject to their passing of special examination conducted by the Assam Medical Examination Board. The usual system of registration of doctors continued during the year under review.

Bihar : In Bihar three medical colleges were functioning during the year 1959. The admission capacity for male and female students were 222. There was a Post-graduate Department of Physiology in the Medical College, Patna. Post-graduate trainings in T.D.D., M.S., M.D. Courses were conducted in Patna and Bihar Universities. Six Medical Officers were deputed for training in D.T.D. and T.D.D. Courses to Delhi and Madras respectively. Six Medical Officers were sent abroad for higher studies in different subjects during the year under report. One Medical Officer was deputed for D.P.M. Course in Bangalore and one for D.T.M.H. Course in Calcutta. The total number of post-graduate students admitted and qualified were 122 and 55 respectively. A post-graduate training for Medical Officers for their refresher courses also functioned during the year under report. A Pharmacy School was started from September, 1959. Training of Nurses and other para-medical personnel was available in different Schools at Patna and Leheria-sarai.

During 1959 there had been no amendments made in the existing act nor there was any enactment of new legislation. No act was also passed placing a restriction on unqualified persons to practise Western System of Medicine.

Bombay : There were nine Medical Colleges functioning in the State. No new Medical College was established during the year under report. The total admission capacity of the existing Colleges was 758.

Jammu and Kashmir : The Government Medical College, Srinagar was established in the year 1959 under the University of Jammu and Kashmir. The admission capacity was 128. Arrangements were continued for reservation of seats for students belonging to Jammu and Kashmir in Medical and Dental Colleges in India. In all 32 seats in regular M.B.B.S. and 3 seats in B.D.S. Courses were reserved for the nominees of the Government of Jammu and Kashmir in various Medical Colleges and Dental Colleges in India.

Kerala: Two Medical Colleges imparted under-graduate and post-graduate medical education. In the under-graduate courses 179 students were admitted and 12 students were admitted in various post-graduate courses during the year under report. Steps were taken to amend the Travancore Cochin Medical Practitioners Act so as to extend it to the Malabar District of the State. The Council of Modern Medicine recommended to Government to amend the Act so as to provide 'B' Class registration to holders of B.A.M. and D.A.M. Diploma holders who had been admitted to the above courses in Ayurvedic College, Travancore.

Madhya Pradesh: Four Medical Colleges with an admission capacity of 276 male and 99 female students were imparting education for M.B.B.S. degree course. The Medical Colleges at Gwalior, Indore, Bhopal are affiliated to the Vikram University, while the Medical College at Jabalpur is affiliated to the Jabalpur University. The actual number of admission of the four Medical Colleges during the year 1959 was 352 and the number of students passed M.B.B.S. degree course from Indore, Gwalior and Jabalpur Medical Colleges was 139. There were special facilities for the post-graduate courses for M.D. and M.S. at Indore and Gwalior Medical Colleges. There were facilities for Diploma Courses in the Diseases of Children (D.C.H.), Tuberculosis (T.D.D.), Ophthalmology, (D.O.M.S.), at M.G.M. Medical College, Indore and in Radiology (D.M.R.E.) at Gwalior. The number of students passed post-graduate degree and diploma courses during 1959 was 26.

During the year 1959, six doctors returned after completing their D.P.H. training at the All-India Institute of Hygiene and Public Health, Calcutta. Five more doctors were deputed for this training commencing at Calcutta from June, 1959. Three doctors who were deputed for training in Anaesthesia at Bombay in 1958 returned this year after completion of their training. Four doctors returned in 1959 after completing their fellowship training in U.S.A. in Medicine, Anatomy, Health Education and Preventive and Social Medicine.

Facilities existed for the training of Sanitary Inspectors, Laboratory Technicians, Compounders, Nursing and other para-medical personnel in the State during 1959. Two members of Nursing Staff availed of refresher courses of Matron, Sister Tutors and Paediatric Nursing sponsored by the Government of India, W.H.O. and UNICEF during the year 1959 as against 11 members during 1958.

Madras: There were 5 Medical Colleges imparting under-graduate training in Medicine in the State of Madras during the year 1959. The opening of the Medical College at Tanjore with 75 admission annually at an estimated cost of Rs. 125·00 lakhs was approved in 1958 and necessary admission to the pre-professional course was made in the same year. The University of Madras introduced a pre-professional course of one year duration after a pass in the pre-university examination as a preliminary to undergoing the degree course of studies in the professional colleges concerned. Accordingly this pre-professional course was introduced for the degree course of M.B.B.S., B.Pharm. and B.D.S.

A post-examination practical training for the period of one year called "Students Internship" was introduced. In accordance with this staff students passing out the M.B.B.S. would have to undergo a training of 3 months in

medicine, 3 months in surgery, 3 months in public health and 3 months in mid-wifery.

Training facilities in D. R. Course and C.R.A. Course and D.C.H. Course were available at the Institute of Paediatrics and Bernard Institute of Radiology. Since the up-grading of the Institute the stipend for C. R. A. student increased to Rs. 50, which was made by the Government of India.

The question of amending the Madras Medical Registration Act, *i.e.* in order to bring the profession up-to-date due to the reorganisation of the States in 1956 was under consideration during the year under report.

Mysore : In Mysore State there were four Medical Colleges imparting M.B.B.S. degree courses during 1959 with an admission capacity of 352. The most important achievement towards the development of the medical education was in respect of steps taken for reorganisation of the staffing pattern etc., in the Medical Colleges. Major General Bhatia, who was appointed by the Government of Mysore, made a detailed study of the working of the Medical Colleges and attached Hospitals and submitted the report to the Government in 1959. The Bangalore Medical School, which was being run by the University of Mysore, was taken over by the Government in 1959.

Seven hospitals imparted Nursing Training to about 300 trainees. Five new training schools for Nurses were sanctioned during 1959, where the strength of the trainees sanctioned was more than 100. The training of the candidates in Mid-wifery, Auxiliary Nurse Mid-wives, Health Visitors, Laboratory Technicians, and Health Inspectors continued, as usual, during the year 1959.

Orissa : Two Medical Colleges *viz.*, S.C.B. Medical Colleges, Cuttack and Burla Medical College, Burla were imparting under-graduate medical education to the students of this State. The number of annual admission of students to the 1st year of the S.C.B. Medical College, Cuttack was raised from 75 to 100. By the end of the year under report, 78 full time and one part time teaching staff (Medical) were working in the College. 69 students passed the final M.B.B.S. examination. The extension of this College started functioning at Burla in November, 1959. The Health Inspectors Training Class, as usual, continued at Cuttack. 59 candidates passed the final examination 1959. There was no facility for Dental Education in the State. After opening the training class for Pharmacists, the Compounders Training Class was abolished.

By the end of the year 1959, the total number of registered medical practitioners was 655 of whom 36 medical graduates were registered during the year under report.

Punjab : Three Medical Colleges in Punjab imparted medical education in M.B.B.S. A Medical School *viz.*, Arya Medical School, Ludhiana was giving training to candidates in L.S.M.F. Course. The period of course for medical graduates was 5½ years whereas the course for L.S.M.F. in Arya Medical School, Ludhiana was 4½ years. The total number of graduates qualified during the year 1959 was 135 and 25 students qualified for L.S.M.F. Diploma. Facilities for post-graduate training in various departments were available in Medical College, Amritsar. 13 candidates were admitted in M.D., 17 in M.S., 9 in D.O.M.S. and 6 in D.T.D. Courses.

The number of doctors registered in the Punjab Medical Register during 1959 was 5,464 of whom 2,705 were graduates and 2,759 were licentiates.

The training of the para-medical personnel in Christian Medical College, Ludhiana and Arya Medical School, Ludhiana was in progress. The number of persons qualified the examination conducted by the Punjab Nurse Registration Council during 1959 were 119 in Nursing, 186 in Midwifery, 159 in Auxiliary Nurse Mid-wifery. The total number of Pharmacists registered in the Punjab Pharmacy Council upto the end of 1959 was 2,895.

Rajasthan : There were two Medical Institutions *viz.,* S.M.S. Medical College, Jaipur with 120 seats and the Medical College, Bikaner with 56 seats, which imparted training to candidates for degree courses in medicine. The number of seats for admission in both the institutions were insufficient to meet the requirement of the State. The Government was considering to open another Medical College during the Third Five Year Plan period. The S.M.S. Medical College was the only institution, where the facilities for post-graduate training and research work was mainly provided with. At this College 25 male and 7 female students were admitted in various post-graduate courses during 1959. The Medical College, Bikaner was started in July, 1959 to meet the greater need for medical education and medical personnel in this State. There was no change in the position of medical registration during the year under report.

Uttar Pradesh : To produce the huge number of Doctors, Dentists, Nurses, Pharmacists, Health Visitors and Auxiliary Nurse Midwives, steps were taken in other respective fields. Three Medical Colleges in Uttar Pradesh were imparting medical education for the purpose. Two premier Medical Colleges, *viz.,* K.G. Medical College, Lucknow and Sarojini Naidu Medical College, Agra continued to impart post-graduate training for M.D., M.S., D.L.O., D.M.R.E., D.O.M.S., D.T.D., D.G.O., D.C.P., D.C.H., Courses. These Medical Colleges turned out 242 medical graduates during the year under report. Besides, a third G.S.V.M. Medical College, established at Kanpur, continued to make a good progress. The first batch of students of this College was admitted in Medical College, Lucknow and was shifted to that College with effect from August, 1959 and 494 students were on roll. The number of admission during 1959 at Medical College, Agra increased from 75 to 100 students.

22 doctors were sent to various institutions in the country for post-graduate training in different specialities. Of these 5 were sent for D.C.P. 3 for D.G.O., 5 for D.A., 4 for Diploma in Orthopaedic, 3 for D.T.D. and 2 for D.C.H. Courses at Agra. Two male Nurses were deputed for training in Psychiatric Nursing at All-India Institute of Mental Health, Bangalore. The training programme for the Auxiliary Nurse was also intensified during the year under review to meet the needs of the State.

West Bengal : 5 Medical Colleges with 450 seats functioned in the State for imparting teaching in M.B.B.S. course of the Calcutta University. The facilities for post-graduate training were available in various Hospital Wards and Laboratories attached to the 3 State Medical Colleges, *viz.,* Medical College, Calcutta, Nilratin Sircar Medical College, Calcutta and R. G. Kar Medical College, Calcutta. Arrangements for training of students in the post-graduate courses *viz.,* T.D.D., D.O.M.S. and D.G.O. were available in

Medical College, Calcutta and R.G. Kar Medical College, Calcutta. Facilities for training of students in the post-graduate courses such as M.D., M.S., M.O.D. Phil and D.H. Courses were also available in the Post-graduate Medical and Research Institute, Calcutta, which was under the direct management of the State Government.

Training facilities for Nurses were available in 15 hospitals. Of these Nursing Schools, 6 were maintained by the State Governments and 9 by the non-Governmental organisations. Facilities for training in Auxiliary-*cum*-Nurse Midwifery, were also available in six Government and one non-Government institutions during 1959. As Junior Nursing Training was abolished, the State planned to convert Junior Schools either into Senior Nursing or Auxiliary Nursing Schools. Fresh admission to Health Visitors Course was also stopped with the idea to do away with such training. However, in order to prepare Nurses for public health work within a short space of time, the orientation course in rural public nursing was introduced in the Health Visitors Training School at Singur for trained Nurses, who were sent there for public health training in two groups in a year. The Calcutta Dental College and Hospital was teaching to students for B.D.S. Course of the Calcutta University. All the Departments were well staffed and the standard of education was considerably stepped up.

There was no amendment to the Bengal Medical Act, 1914, and no change occurred in the composition of the West Bengal Medical Council. 76 male students and 13 female students were admitted in post-graduate courses and the total number of students qualified in various post-graduate courses was 56.

Delhi : Three Medical Colleges were functioning to impart undergraduate medical education to students during the year under report. 153 male and 55 female students were admitted in different institutions for post-graduate courses in medical education during 1959. Out of these 56 were under post-graduate training at the All India Institute of Medical Sciences, New Delhi-16 and 20 in Vallabh-Bhai Patel Chest Institute, Delhi-6.

The Victoria Zanana Hospital imparts training in general nursing and mid-wifery. The College of Nursing, New Delhi functioned, as usual, during the year under report.

Himachal Pradesh : There was no arrangement for training of doctors and in medicine and in dental education in this Union Territory. 17 candidates for M.B.B.S. Course were sent to various Medical Colleges outside the Territory during 1959. However, facilities existed for training in General Nursing and Health Visitors, Public Health Nurses, Auxiliary Nurse Midwives, Dais, etc. There was no facility for training in Pharmacy, Sanitary Inspectorship. Local candidates were sent out of this Territory for these trainings.

Pondicherry : The Medical College in Pondicherry was established in 1956. The entire expenditure of this College is borne by the Central Government. The foundation stone of permanent building at Gorimedu was laid down by H.E. Count Stanislas Ostrorog, the French Ambassador in India on the 14th March, 1959. The College is affiliated to the University of Madras for pre-professional and first M.B.B.S. Course. 50 students were admitted for pre-medical course during 1959-60. The total number of student on roll was 161.

CHAPTER IX

CHAPTER IX

(i) Dental Education and Registration

In 1945, the Bhore Committee recorded "Dentistry has unfortunately been one of the neglected subjects of study in practically all Indian Universities". With the advent of independence, the importance of Dentistry is being recognised. Whatever has been achieved during these 14 years (1945-59) is indeed very encouraging, though the target set-out by the Bhore Committee *viz.*, one dentist for every 4,000 population is still far from reach. In 1945 there were only 3 dental institutions in India (divided) and by 1959 there were 10 dental institutions with total annual admission of about 327 students for a regular four year B.D.S. course, the licentiate courses having been dispensed with.

Out of the provision of 75 lakhs for expansion of existing dental colleges and establishment of new dental colleges, two new dental colleges were sanctioned ; one each in the States of Kerala and Andhra Pradesh. The existing dental colleges one each in Bombay, Madras, Punjab, Uttar Pradesh and West Bengal were up-graded. A dental college at Bangalore was also opened in October, 1959. The total number of admissions for all the dental colleges, including 3 new ones, was 327. The number of graduates passed out in 1959 was 127.

The six month training facilities for examination No. 1 referred to in Second provision to Section 34(1) of the Dentist Act, 1948 were sanctioned by the Government of India and the Government of Uttar Pradesh at the Dental College and Hospital, Lucknow since 1958. The 3rd batch consisting of 9 candidates appeared in Examination No. 1 conducted by the Council at the Dental College, Lucknow and 8 candidates were successful and granted the certificate during 1959.

In order to provide adequate dental care to a large section of the population at the hands of properly trained Dental Surgeons, a scheme for establishment of Dental Clinics in district hospitals in States was included in the Second Five Year Plan period (1956-61).

It was proposed to establish 350 Dental Clinics at cost of Rs. 151 lakhs during the Second Five Year Plan. As against this target of 350 Dental Clinics, the Government of India have sanctioned 107 clinics of which 42 clinics started functioning upto the end of 1959.

The State-wise distribution of the 107 Dental Clinics as it was so far sanctioned by the Government of India under the scheme is detailed below : —

States	No. of Dental Clinics allotted			
	1956—57	1957—58	1958—59	1959—60
1	2	3	4	5
1. Andhra Pradesh	3	4	3	9
2. Assam	3	—	—	—

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1	2	3	4	5
3. Bihar	2	2	4	4
4. Jammu and Kashmir	—	7	—	—
5. Kerala	3	3	—	—
6. Mysore	2	—	—	1
7. Madhya Pradesh	3	—	1	1
8. Madras	3	2	2	3
9. Orissa	—	—	4	—
10. Punjab	2	2	3	—
11. Rajasthan	—	4	4	4
12. Uttar Pradesh	2	2	2	2
13. West Bengal	4	—	2	5
TOTAL	27	26	25	29

Note: —=Nil information.

The difficulty in opening out Dental Clinics was that the State Governments were not prepared to give the matching grants. Under the scheme, financial assistance to the extent of 75 per cent of the non-recurring expenditure on equipment and 50 per cent of the recurring expenditure mentioned above was payable by the State Government during the plan period. The State Governments were to provide accommodation for the clinics and bear the remaining expenditure. The number of dental institutions in India during the year under report is shown in Table No. 60.

In every State, the population being served by a dental practitioner, is more in urban and practically nil in rural areas. The ratio of a dentist (including unqualified dentists) to population of our country was 1:78,500 and the total number of dentists both qualified and unqualified was 7,000 approximately during 1959. The most common diseases reported were caries, pyorrhoea, abscess, gingivitis, disorders of occlusion, eruption and development etc.

(ii) Dental Council of India, New Delhi

The Dental Council of India devoted its attention to the provision of educational facilities and to maintain the minimum standards of the existing courses in dental education. On the Council's recommendations for the Second Five Year Plan period under the provisions accepted by the Government of India, the existing colleges were expanded at Madras, Punjab, Lucknow, Calcutta and Bombay and 3 new Dental Colleges were opened at Hyderabad, Trivandrum and Bangalore during 1959. The building for a new Dental College at Nagpur was under construction.

Nothing has so far been decided regarding the recognition of Indian Dental qualifications by the General Dental Council of U.K. They insist on sending their own visitors to inspect our institutions before considering each institution for recognition whereas the Dental Council of India have been insisting on recognition on the basis of their own Inspectors' reports as submitted by the Inspectors appointed by them.

The Dental Council of India have become Associate Sustaining Member of the Indian Standards Institution during the year 1959. This will help the new task of standardisation of certain dental goods now being manufactured in the country. The Indian Standards Institution have agreed to take up this line and work has already started on certain items suggested by this Council.

During the year under review, certain amendments were made in the "minimum basic qualifications laid down by the Council for appointment as Dental Teachers in Dental Colleges." The Medical Council of India have been requested to amend the recommendation laid down by them for appointment to posts of Dental Teachers in Medical Colleges so as to bring them in conformity with those prescribed by the Council for appointment of teachers in Dental Colleges. In October, 1959 another inspection of the Dental Wing of the Madras Medical College, Madras was carried out by the Inspectors appointed by the Council with a view to ascertain the process made in removing the deficiencies pointed out in the last inspection, as well as to ascertain the adequacy of courses and facilities existing for the teaching of the B.D.S. courses. As required under the Dentist Act, 1948 this report was forwarded to the University of Madras for their comments thereon.

The Dental Council of India appointed a Sub-Committee to study and modify effectively the existing Code of Ethics for Dentists previously laid down by the Council and approved by the Government.

M.D.S. Course :

The Council's recommendations with regard to the establishment of Master Degree Course in Dentistry in the country have now materialised. The Bombay University have recently started the M.D.S. Course in the following 7 subjects at the 2 dental institutions at Bombay :—

(1) Periodontia, Orthodontia and Prosthetics in Sir C.E.M. Dental College and Hospital ; and

(2) Oral Surgery, Operative Pathology, Bacteriology and Radiology in Nair Hospital Dental College.

Sir C.E.M. Dental College had opened one Department *i.e.*, Operative Dentistry and the Nair Hospital Dental College three Departments *viz.*, Periodontia, Orthodontia and Prosthetics.

The Central Government on the recommendation of this Council have sanctioned 42 stipends at the rate of Rs. 150 p.m. for any graduate giving an undertaking to serve the State Government for a period of 3 years. This stipend will go a long way to meet the requirements of our teachers in the newly established Dental Colleges and in the existing ones that have to be expanded.

Certain amendments were made in the minimum basic qualifications prescribed by the Council for Professor and Head of the Department in M.D.S. Course.

The Council decided to inspect those institutions for the facilities available for training, adequacy of courses and the standard of examinations in due course.

The Council after considering the report of the "Late Dr. Satya Pal's Dental College (Defunct), Lahore", the Investigation Sub-Committee unani-

mously resolved that the "Diploma of the Punjab Dental College/Dental and Optical College, Lahore, if granted on or before 14th August, 1947, be recognized under item 30 of Part 11 of the Schedule to the Dentist Act, 1948 provided that each application for registration by such candidates is scrutinised and recommended by the Executive Committee of this Council."

The Dental Goods Manufacturing Sub-Committee of the Council also was making a steady progress in the manufacture of dental goods in the country during the year under report.

Apart from the activities of the Central Government and the Dental Council of India in the field of Dentistry, the activities of the State Governments and the State Dental Councils are summarised below :—

Andhra Pradesh : The Dental Department of King George Hospital was intended for catering to the needs of the under-graduate students of Andhra Medical College, Visakhapatnam.

Kerala : A Dental Wing in Medical College, Trivandrum was opened with an admission capacity of 15 students for B.D.S. course.

Madras : The B.D.S. course conducted by the University of Madras has been declared by the Dental Council of India as a recognized dental qualification. The total number of seats available for this course during 1959 was 20. The University of Madras has, as a part of the scheme of reorganisation of the University courses of studies, introduced a pre-professional course of one year duration after a pass in the pre-University examination for the degree course of B.D.S. and other medical degrees.

Madhya Pradesh : The Madhya Pradesh State Dental Council is still functioning at Nagpur. It is being an Inter-State Corporation, the necessary proposals for its division and assets of liabilities have long been taken by them. Consequent upon the finalisation of the scheme the assets and liabilities of the Council shall be distributed between the Governments of Maharashtra and Madhya Pradesh. There is no Council of Dentists in Vindhya Pradesh, Bhopal and Madhya Pradesh Region of this State. The necessary proposals for constitution of the Dentists Registration Tribunal for the whole State have already been sent to the State Government and the matter is being looked into. This will enable all the unregistered dentists to get registered with this Tribunal.

Mysore : The Dental College started at Bangalore functioned satisfactorily. The Government of Mysore sanctioned construction of new building for the Dental College at a cost of Rs. 13·10 lakhs and the work was already started.

Orissa : There was no facility for dental education in this State.

Punjab : The Punjab Government Dental College and Hospital, Amritsar was established in October, 1952. This college admits 30 students (24 boys and 6 girls) every year with reservation for scheduled castes and also for Jammu and Kashmir State as prescribed by the State Government.

The total number of old and new cases treated in the hospital during the year under report was 40,414 of which 21,608 cases were new.

15 students appeared in B.D.S. final examination of whom 12 were successful. It was proposed to start M.D.S. Course at this institution. Rules and regulations for M.D.S. Course were approved by the Punjab University. The total number of dentist registered in Part A and Part B of the Punjab Dental Council were 106 and 932 respectively.

Rajasthan : There was no medical college or school for dental education in this State. The Dentist Act passed by the Government of India has not been enforced in the State as yet. However, the Dental Department of S.M.S. Hospital, Jaipur had training facilities in Dentistry for the medical students of M.B.B.S. course. The Dental Registration Act was not in force in this State.

Uttar Pradesh : The Dental College, attached to the King George's Medical College, Lucknow, was expanded during the year under report. The first batch of 20 additional students of B.D.S. course was started from August, 1959. This had raised the admission capacity from 20 to 40.

West Bengal : The Calcutta Dental College and Hospital was the only Dental College in the State. The Institution teaches students for B.D.S. course (a four year training course in Dentistry) of the Calcutta University. It was financed and controlled by the Government of West Bengal, while its inspection work was done both by the Dental Council of India and by the Calcutta University. The College had four Departments all filled with the up-to-date appliances. It had highly qualified experienced teaching staff to take charge of different branches of University. No Act has so far been passed placing restrictions on the practice by unregistered dentists.

Delhi : Only four qualified dentists were registered in the year 1959.

Himachal Pradesh : The Dentists Act, 1948 was in force in Himachal Pradesh. The Rules under the Act were framed by the Himachal Pradesh Administration and the question of constitution of a Dentists Legislation Tribunal was taken up.

CHAPTER X

CHAPTER X

(i) Central Drugs Standard Control Organisation

The responsibility for control over the manufacture and sale of drugs rests with the State Governments while control over the quality of imported drugs including new drugs, continued to be exercised by the Central Government through the Drugs Controller, India, who is the Controlling Officer and the Licensing Authority under the Drugs Act. The Central Government, in the interest of uniformity of procedure throughout the country, coordinates the action taken by the State Governments and supplies expert advice and other such assistance as is necessary for the efficient enforcement of the Act. The Ports of Bombay, Calcutta, Madras and Cochin continued to be recognised as Ports of entry for drugs and medicines imported into the country by sea. There was no change in the other points of entry for drugs into the country. A strict check was exercised by the Ports' Officers over the quality of drugs imported into the country by sea, air and post. The major achievements of the Central Drugs Standard Control Organisation during 1959 are as follows:—

(i) Introduction of the Drugs Control Machinery in the State of Rajasthan and in the Telengana area of Andhra Pradesh State;

(ii) Adoption of measures to ensure closer liasion with the drugs trade and industry in order to achieve a better and smoother enforcement of Drugs Standard Control;

(iii) Assistance to State Governments in Drugs Standard Control measures;

(iv) Provision of greater facilities for testing of drugs under the Drugs Act;

(v) More rigid control over the distribution and import of narcotic drugs;

(vi) Liasion with the Ministry of Commerce and Industry in matters relating to Import Trade Control Regulations and the development of the drugs industry; and

(vii) Publication of the National Formulary of India and the completion and of the Supplement to the Indian Pharmacopoeia.

The Drugs Act and the rules thereunder were operative throughout the country except in the State of Jammu and Kashmir. In the State of Rajasthan and in Telengana area of Andhra Pradesh requisite machinery for the enforcement of the Act was established during the year under report.

The Drugs Controller of India, who is the licensing authority for purposes of imports of drugs, was assisted by the Deputy Drugs Controller and two Assistant Drugs Controllers at the headquarters and Assistant Drugs Controllers (India) each at the ports of Bombay, Calcutta, Madras and Technical Officers at the Port of Cochin.

The number of samples drawn for examination from imported consignments during the year 1959-60 were 11,830. Of these, 831 samples were sent for test to the Central Drugs Laboratory, Calcutta and 777 samples were found to be of standard quality. The rest were declared to be not of standard quality and these mainly consisted of biological products.

The following are the particulars regarding the bill of entry, samples examined and sent for test etc., during the year under report:—

Name of the port of entry	No. of bills of entry	No. of items covered by the bills of entry	No. of samples drawn for examination		No. of samples sent for test		No. of samples declared to be not of standard quality	
			Under Rule 40	Under Rule 26	Under Rule 40	Under Rule 26	From those tested under Rule 40	From those tested under Rule 26
1. Bombay . .	16,899	29,386	6,943	104	353	104	20	2
2. Calcutta . .	3,353	5,441	1,592	9	222	6	20	1
3. Madras . .	2,664	4,441	3,201	71	101	25	9	1
4. Cochin . .	75	177	94	2	18	2	1	—
TOTAL .	22,991	39,445	11,830	186	694	137	50	4

The table given below indicates the break-up of the samples classified according to categories such as Vitamins, Hormones etc., which were drawn for examination and sent for test during the period under review. It may be observed from this table that "Biological" and "Other Drugs" accounted for most of the products which were declared not of standard quality.

Category of samples	No. of samples drawn for examination		No. of samples sent for test		No. of samples declared not of standard quality	
	Under Rule 40	Under Rule 26	Under Rule 40	Under Rule 26	Under Rule 40	Under Rule 26
1	2	3	4	5	6	7
(i) Vitamins	1,162	20	37	13	—	2
(ii) Hormones	451	9	9	9	1	—
(iii) Antibiotics	732	40	34	32	2	1
(iv) Insulin	162	13	2	11	—	—
(v) Biological Products Chemotherapeutic	593	67	142	54	8	1
(vi) Drugs	795	6	92	2	3	—
(vii) Galenicals	30	—	2	—	1	—
(viii) Other Drugs . . .	7,905	31	376	16	35	—
TOTAL .	11,830	186	694	137	50	4

Samples of biological products such as Sera, Vaccine, Vitamins, Hormones etc., which are likely to deteriorate on storage or under inadequate storage conditions, were also drawn from the premises of the importers

under rule 26 of the drugs rules at frequent intervals and were sent for test. Out of 186 such samples drawn for examination during the period under report, 4 were reported to be not of standard quality.

The Drugs Standard Control Officers at the Ports inspected the premises of 49 importers during the year under report to ensure that the premises were adequately equipped for stocking drugs which requires special arrangements. Import licences under the drugs act were not issued to those parties who did not comply with the requirements of the drugs rules in respect of accommodation and storage facilities.

Import of New Drugs

During the year 1959-60, 79 applications for the permission to import new drugs under Rule 30-A of the Drugs Rules were received as compared to 63 applications during the previous year. Detailed literature giving particulars of the tests and the results of clinical trials carried out with new drugs were called for from the applicants. The medical literature and the results of clinical trials carried out with the drugs and other technical material furnished by the manufacturers of the drugs were examined and necessary expert opinions from bodies like Indian Council of Medical Research, the Central Drug Research Institute, Lucknow, the Adviser in T.B. and the Director, Indian Cancer Research Centre, Bombay etc., obtained. A "Screening Committee", consisting of experts, examines the toxicity, dosage etc. of these new drugs and advises whether further clinical trial should be carried out in the country. Only those drugs in respect of which there was evidence available about efficacy and harmlessness were permitted to be imported. No drug, which was not permitted to be sold in the country of origin, was given the permission to import. The new drugs permitted to be imported under Rule 30-A covered a wide range of drugs in the field of chemotherapy and comprised among others 5 anti-infective drugs three diuretics, two anti-amoebic drugs, two anaesthetics, two hormones for protein anabolism, two tranquilizers, a drug for leprosy, a drug for parkinson's disease, a drug for contract operation etc.

During the period under report the value of the drugs imported into the country was estimated to be approximately of Rs. 14,36,13,780 as compared to Rs. 12,93,77,990 worth of drugs imported during 1958-59.

Drugs Technical Advisory Board

The Annual Meeting of the Drugs Technical Advisory Board was held on the 10th December, 1959. The Board, which is a statutory body, examined a number of proposals for the amendment of the drugs rules and made the following important recommendations to the Government :—

(i) For the purpose of manufacture of drugs under the drugs rules provision should be made for the approval of foreign qualifications of the persons who might be engaged as the in-charge of the manufacturing operations. The approval of the foreign qualifications should, however, vest in the Central Government;

(ii) The Indian Pharmacopoeia should be the sole book of standards under the Drugs Act and the Rules thereunder for drugs included in it. In respect of other drugs the standards shall be those laid down in the pharmacopeias of the country of origin.

Three Sub-committees were constituted by the Drugs Technical Advisory Board working on various subjects. The Poisons Sub-Committee prepared a uniform list of non-drug poisons which might be controlled by the State Governments under the Poisons Act, 1919 and also finalised a list of poisons which should be controlled under the Drugs Act. The Veterinary Biological Products Sub-Committee had been examining the general question of bringing veterinary drugs within the scope of Drugs Act. In particular, this Sub-Committee was examining the special provisions that required to be introduced in the drugs rules for controlling veterinary biological products. Another Sub-Committee worked on the minimum requirements of the accommodation, equipment and other pre-requisites that should be complied with by manufacturers of biological and non-biological products.

A consolidated list of draft amendments to the drugs rules was published. Among other things, this list of amendments contained a definition for the term "Registered Medical Practitioner" for the purpose of the drugs rules. Provisions for repacking of drugs have been introduced and special concessions in regard to licence fees, equipment, technical personnel etc., were prescribed for re-packers. The grant of "Warranties" by manufacturers or their agents, for drugs sold by them were made compulsory.

Drugs Consultative Committee

The Drugs Consultative Committee, which consists of representatives from the Central and State Governments, advises on matters tending to secure uniformity of administration of the Drugs Act in the country. Sixth meeting of the Drugs Consultative Committee was held on the 6th November, 1959 at Lucknow. The salient recommendations of this Committee are :—

(i) A provision should be made in the Drugs Act or the rules empowering the Licensing Authority to examine the composition and dosage of preparations proposed to be manufactured and refuse licences if such preparations and therapeutically of no value or harmful ;

(ii) Scope of Rule 110 of the Drugs Rules should be amplified to cover Schedule C(1) drugs ;

(iii) Schedule J to the Drugs Rules should be brought in line with the Schedule to the Drugs and Magic Remedies (Objectionable Advertisements) Rules ; and

(iv) The scheme of "Loan Licences" should be reviewed by an ad-hoc Sub-Committee.

It was decided that more meetings of this Committee should be held so as to enable the State Drugs Control Officers to discuss their mutual difficulties and to exchange ideas.

Analysts Conference

Following the resolutions passed at the Second Analysts Conference held in 1957, studies on several crude drugs were initiated after procuring authentic samples from reliable sources.

The shelf-life of vitamin preparations was also studied. A number of pharmacopoeial vitamin preparations were specially got processed and distributed to the collaborating laboratories to be tested at quarterly intervals over a period of two years to study the loss of potency. Similar studies on penicillin ointment were also underway.

Indian Pharmacopoeia Committee

The tenure of Indian Pharmacopoeia Committee expired in November, 1959 and the Government of India, Ministry of Health extended the term of the Committee for a further period of one year.

The addendum to the Indian Pharmacopoeia, which would bring within the scope of the first edition of the Indian Pharmacopoeia, the latest drugs in the field, was completed and sent to the press for print.

The work on the compilation of the second edition of the Indian Pharmacopoeia was vigorously pursued. A list of drugs to be included in the next edition was finalised by the Indian Pharmacopoeia Committee and draft monographs were being finalised in consultation with the various Sub-Committees. Eleven Sub-Committees had been eaxmining the monographs.

A notable feature in the next edition of the Indian Pharmacopoeia would be the inclusion of certain established drugs and remedies from the Indigenous Systems of Medicine such as Ayurvedic and Unani. A special Sub-Committee has been working on this aspect. A list of those medicinal plants and medicines from the Indigenous Systems of Medicine to be included in the Indian Pharmacopoeia has been finalised.

Campaign against Spurious drugs

With the tightening of provisions under the Drugs Act, the State Governments were advised to constitute Anti-spurious Drugs Committees for enlisting the support of prominent citizens and members of the trade for the campaign. With a view to intensifying the drive against the menace of spurious drugs, it is proposed further to amend the Drugs Act to provide for compulsory imprisonment of one year those who are convicted for the manufacture of sale of spurious drugs. Powers were also acquired by the Central Government to enable them to appoint inspectors who will work in close collaboration with the State Drug Inspectorates and help to keep a check on the quality of drugs manufactured in the country.

Administration of Drugs Act in the States

For successful enforcement of the Drugs Act, three factors are essential *viz.*, (1) Adequate number of Inspectors (2) Adequate provisions for testing facilities (3) Specially trained staff on adequate basis for purposes of detection of spurious drugs, handling of prosecutions and examination of legal aspects concerning enforcement of the provisions of the Act. Except in the States of Bombay, Kerala, Madhya Pradesh and Punjab, where there are whole time State Drugs Controllers, the provisions of the Drugs Act were enforced in the remaining States by the Medical and Public Health Departments, who functioned as State Drugs Controllers and Licensing Authorities in addition to their own duties. During the year under review, the Drugs Act was extended to the Telengana Area of Andhra Pradesh State and re-enforced in the State of Rajasthan.

Import of Essential Drugs

The Chief Controller of Imports and Exports in consultation with the Directorate General of Health Services, New Delhi revised the import policy in regard to the drugs and medicines in April, 1959 and October, 1959. The

endeavour was always to obtain within the limited foreign exchange available as many and as much of the essential drugs as possible. The import policy of the year did not permit with some exceptions of the import of patent medicines. Even the essential drugs, which were listed in the Red Book were as far as possible allowed to be imported in bulk to be further processed into this country. The Directorate General of Health Services, New Delhi keeps a constant watch so that the level of the imports of essential drugs permitted in the import trade control regulations was adequate to meet the normal requirements of the country during the year under review.

Drugs and Magic Remedies (Objectionable Advertisements) Act

Both the Central and State Governments are concerned with the enforcement aspect of the Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954 with a view to counteracting the increasing danger to public health consequent on people taking recourse to indiscriminate self-medication with drugs, appliances and magic remedies advertisements in lay-press, particularly for certain diseases and conditions specified in Section 3 of the Act and in the Schedule to the rules thereunder.

Development of the Indigenous Pharmaceutical Industry

The Drugs Controller (India) also functions as the Industrial Adviser for Pharmaceuticals and Drugs in the Ministry of Commerce and Industry.

Proposals for manufacture of drugs in this country were scrutinised by the Drugs Controller (India), who comments on the essentiality of the items involved and also on other terms and conditions of manufacture such as price, procurement of raw material and the royalty etc.

(ii) Quinine and Anti-Malaria Drugs

The Central Council of Health at its meeting at Shillong in January, 1959, passed a resolution recommending the reduction of the central reserve of quinine to the level of one year's requirements in view of the decrease in consumption of quinine due to the National Malaria Eradication Programme. It further recommended that the stocks rendered surplus should be disposed of by export or by distribution to the rural areas. It also referred to the difficulties experienced in the working of the zonal system of distribution of quinine which, it said, should be resolved by mutual consultation between the State Governments and the Central Government.

A quinine conference was held at Calcutta on 10th August, 1959 to consider the above recommendations and the problems facing the cinchona industry in general. Among the resolutions passed at this conference was one of the recommendations that no reserve stock of quinine need be maintained any longer in view of the declining incidence of malaria.

The conference also recommended that the Governments of West Bengal and Madras should progressively reduce the area under cinchona cultivation and suggested steps to dispose of the stocks rendered surplus by distributing the same in villages through the medium of Gram Panchayats, Development Blocks, Primary Health Centres and Post Offices, exploration of the export market for quinine abroad which may mean even lowering of prices to withstand international completion and finally to step up research on the possible uses of quinine other than those as an anti-malarial

drug. As regards the zonal system of distribution of quinine, the conference recommended that it should be discontinued except for purchases by State Government Institutions. Another imporant recommendation made by the conference was that Government should examine the possibility of imposing total ban on the import of synthetic anti-malarials in addition to quinine products.

The Secretary, Council of Scientific and Industrial Research, New Delhi who was requested to take up the problem of finding out alternative uses for quinine made two suggestions *viz.*, (i) to convert the quinine into quinoline derivatives which are useful both in medicine and in the dye stuff industry and (ii) to carry out extensive clinical trials to confirm the use of quinine as a potentiator of analgesics like aspirin, phenacetin etc. These have been recommended to be studied further.

The question of imposing a total ban on synthetic anti-malarials as recommended by the quinine conference, however, needs cautious examinations, as these drugs are still used in the National Malaria Eradication Programme and by the Defence Services in view of their distinct advantages over quinine in suppressive treatment, quick action, and lower dosage etc. The import restrictions on synthetic anti-malarials, therefore, continue as in the previous licensing periods, the import policy for progunil being nil while that for 4-amino-quinoline derivatives is 15 per cent of the average of previous year's imports.

(iii) Medical Stores Organisation

The Medical Stores Organisation is a permanent organisation of the Government of India. It consists of Medical Stores Depots located at Madras, Bombay, Calcutta and Karnal (Punjab) and two factories attached to the Depots at Madras and Bombay for the manufacture of tinctures, tablets, bandages etc. A repair shop attached to the Depot at Madras is engaged in the repairs to surgical instruments and equipments. A laboratory is attached to each of the Depots at Madras, Bombay and Calcutta for testing of drugs and chemicals. All the biological products are tested centrally in the laboratory attached to Medical Stores Depot, Calcutta.

A Labour Welfare Officer, attached to Medical Stores Depot, Madras, looks after the welfare of the labour working in the depots and factories at Madras and Bombay.

The depots are primarily engaged in making supplies to the indentors enrolled with them. These are civil medical institutions under the control of Central and State Governments, Railways, local bodies etc. Besides, there are several casual indentors drawing supplies from medical stores depots as and when required. As a result of various improvements effected in the working in the Organisation as a whole, the clientele of the depots steadily increased during the year under report and the number of regular indentors rose to 11,813 at the end of the year from 10,868 in 1958.

The priced vocabulary of Medical Stores (India), 1942 is amended from time to time was followed by the Medical Stores Depots in common with the Armed Forces Medical Stores Depots for purchase and supply. The

varying needs of the civil indentors and the developments in the pharmaceutical and surgical fields made it necessary for the Organisation to adopt an up-to-date vocabulary of its own and this was published under the title "Vocabulary of Medical Stores (Civil), 1959".

During the year under review, the Advisory Committees comprising Administrative Medical Officers in each zone of supply, were constituted for each of the Medical Stores Depots. The meetings of the Advisory Committees were held quarterly.

In addition to their normal supply duties, the depots situated at the Ports continued to receive from abroad medical stores and various items like DDT, milk powder etc., from international agencies such as UNICEF, W.H.O. and T.C.M. The value of international stores handled by the depots at Madras, Bombay and Calcutta during 1959 is as follows :—

Receipt	=	Rs. 90,982,482
Issue	=	Rs. 98,624,718

CHAPTER XI

Medico-Legal Work and the Serologist Department

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CHAPTER XI

MEDICO-LEGAL WORK AND THE SEROLOGIST DEPARTMENT

The administration and working of the Department of Serologist and Chemical Examiner to the Government of India with observations on the medico-legal work and the Antigen Production Unit, continued to function at No. 3 Kyd. Street, Calcutta-16 during 1959. A skeletal portion of the Antigen Production Unit continue to remain in the ground floor of the building of the Central Drugs Laboratory in the same premises.

In addition to the permanent staff of the department consisting of Serologist, four Assistant Serologists, two Chemists, six Laboratory Assistants, two posts of Technical Assistants, three posts for Laboratory Technicians and three posts for Laboratory Attendants were sanctioned at the end of 1958 and were filled in at the beginning of 1959. The permanent staff in the Antigen Production Unit consisted of one Bio-Chemist and one Assistant Serologist, one Assistant Chemist, three Laboratory Technicians etc.

The steady increase in the number of medico-legal cases referred to this department, which has been noticeable during the last few years, continued during the year under review. This increase has been considerable in the case of requests for the determination of blood group in blood and semen stains and has involved such increase in the technical as well as clerical work of the department.

The department continued to function for the Union of Burma and 383 articles relating to 191 cases were examined during the year under review.

46,478 exhibits were analysed from 9,743 cases against 40,460 exhibits from 8,548 cases in the previous year. It will be noticed that the cases were increased by 14·0 per cent. The tests for blood and semen groups were done on 27,475 exhibits from 5,135 cases as compared with 25,644 exhibits from 4,706 cases in the previous year. Thus blood and semen group cases were increased by 9·1 per cent and exhibits in these cases by 7·1 per cent. It will also be noticed that the demand for blood and semen group was made in more than 52·0 per cent of the total cases. Demands for information other than the region of blood in stains were also received.

Besides medico-legal analysis, the department also carried out clinical tests for the medical institutions under the Government of West Bengal. During the year under report, serologic tests for syphilis were done in 11,367 serum samples. This included 5,767 Wasserman tests and 5,600 V.D.R.L. slide tests.

Medico-legal analysis of blood and other stain on exhibits, ceased in connection with the prosecutions of criminal cases for the detection of the origin of blood etc., form the principle activity of this Department. This is a continuation of the examinations to which these are subjected in the first instance by the Chemical Examiners in the States. Portions of exhibits, which were found to be blood stained, were forwarded by them to this Department for confirmation and detection of the origin and grouping.

The results of the examinations carried out by the Department have high evidential value and are greatly valued by the High Courts. Besides, the State Chemical Examiners have to undertake a large number of examinations for the detection and identification of poisons in cases of alleged poisoning and other miscellaneous examinations in connection with certain other State activities. The summary of work done by the State Chemical Examiners and the Chemical Examiner in the Serologist Department is shown in Table No. 61.

The Antigen Production Unit established for the manufacture of Cardiolipin Antigen for Sero-diagnosis of Syphilis continued to be under the direction of the Serologist. The Unit continued with the regular production of VDRL Antigen. 29,390 ampoules of the Antigen were issued to the Medical Stores Depot, Calcutta for distribution.

Training :

The usual course of lectures and demonstrations on Serology and Immunology were given to the students, preparing for DTMH Diploma of the Calcutta University, at the School of Tropical Medicine and the L.T.M. Classes of the Faculty of Tropical Medicine and Hygiene of West Bengal at the aforesaid School. A course of instructions on serology to the students of DCP classes of the Calcutta University was also given.

Lectures were given to the trainees at the Central Detective Training School, Intelligence Bureau on Serology with particular stress on the role of these Serologists with reference to police investigations of cases involving blood, semen, saliva.

The Central Medico-Legal Advisory Committee was reconstituted and its term was extended for three years.

CHAPTER XII

Port and Airport Health Administration

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CHAPTER XII

PORT AND AIRPORT HEALTH ADMINISTRATION

The health administration of Sea-ports and Airports is carried out under the Indian Port Health Rules, 1955 and the Indian Aircraft (Public Health) Rules, 1954 respectively. These rules are based on the International Sanitary Regulations and provide for measures to prevent the import and export of quarantinable diseases through sea and air traffic *viz.*, plague, smallpox, cholera, yellow fever, typhus (louse-borne) and relapsing fever in particular and other infectious and communicable diseases in general. As International quarantine is a Central subject, the quarantine administration at the six major ports *viz.*, Calcutta, Visakhapatnam, Madras, Cochin, Bombay and Kandla and five international airports *viz.*, Bombay (Santa Cruz), Calcutta (Dum Dum), Madras (Mennambakam), Tiruchirappali and Delhi (Palam) is directly controlled by the Central Government. The quarantine administration at the minor ports has been delegated to the respective State Governments. Part time health clearance arrangements also exist at the Amritsar Airport (Rajasansi), the Car-Nicobar Airport and at Ahmedabad, Poona, Begumpet, Lucknow, Allahabad and Gaya, where international aircraft can be diverted under emergency conditions.

No quarantine restrictions are applicable to a traffic between India and Pakistan or between India and Nepal. With a view to imposing health restrictions in respect of traffic between India and Tibet during an epidemic, arrangements were made in co-operation with different Sub-Himalayan States for the establishment of check-posts on the main traffic routes.

As the most important diseases from the point of view of risk to India is yellow-fever and as India is a yellow fever receptive area, special precautions were taken to prevent the entry of this disease to India through aerial and maritime traffic. All aircrafts entering India are disinsected as a routine measure, if not already done so at Karachi Airport (Pakistan). Under the rules in force, an aircraft entering India from any place outside India can only land at Bombay or Calcutta Airport, both of which are adequately equipped to take necessary measures as provided in the International Sanitary Regulations. An aircraft operating between Ceylon and India can land at Tiruchirappalli or Madras Airport ; an aircraft operating between Afghanistan and India can land at the Amritsar Airport and an aircraft operating between Singapore and India can land at Madras Airport. All persons arriving within nine days of their departure from yellow fever infected areas without valid certificates of vaccinations against yellow-fever are detained in quarantine for appropriate periods. Monkeys being most prone to be reservoir of yellow fever infection are not permitted to be brought to India unless covered by a certificate from the Governmental Authorities of the country of shipment declaring that they have not been to any yellow fever infected area within 31 days of shipment. Those not covered by such a certificate are destroyed.

Under the arrangements with the Government of Pakistan, international passengers in transit, who are at risk to yellow fever, are detained for isolation at Karachi Airport unless they are proceeding in the same international aircraft to Bombay or Calcutta Airport, where adequate arrangements for their isolation under mosquito proof conditions exist.

The Government of India is under an agreement with the Governments of Burma, Sarawak, Phillipines in terms of Articles 75 and 104 of the International Sanitary Regulations to the effect that unprotected international passengers at risk to yellow fever intending to proceed to any of these countries shall be detained for isolation in India for the requisite period.

During the year under report no ship or aircraft brought to India any case of quarantine diseases. Infectious cases notified from ships were promptly attended and precautionary measures were taken by the health staff.

The sanitary conditions of the ports and airports and the areas adjoining them remained fairly satisfactory throughout the year under report. To make our ports and airports non-receptive to quaratine diseases intensive anti-mosquito, anti-rodent and other sanitary measures were taken in all the major ports and international airports. The water supply was subjected to periodical test and found to be satisfactory. Sale of food and catering arrangements were inspected periodically and defects noticed were corrected where possible by the authorities concerned. The port and airport health committees constituted for the co-ordination of better supervision and control and sanitation, anti-mosquito work, anti-rodent work etc., in the ports and airports and the surrounding areas functioned satisfactorily during the year under review. These committees generally met once in three months.

Over 19,000 pilgrims from India visited Hedjas during the Haj season in 1959. The Haj traffic was the highest ever since the partition of the Indian sub-continent and India was third in the order of number of pilgrims, who went to Haj. The Haj season lasted for over four months. There were two pre-Ramjan sailings. After Id from 20th April, 1959 regular batches of Indian pilgrims started going for Haj. A medical mission from India consisting of two male doctors, one female doctor and two compounders were sent by the Government of India to attend to the medical needs of the pilgrims. Along with the medical mission sufficient supply of medical stores had also been sent by the Government to treat the sick pilgrims during Haj. Besides, other useful drugs worth about Rs. 2,000 were purchased there locally for treating the poor and seriously ill pilgrims irrespective of their nationalities. By September, 1959 all the pilgrims returned to India along with the medical missions.

The Ganga Sagar Mela was held from 13th to 15th January, 1959. Usual sanitary arrangements were made by the Port Health Officer, Calcutta on behalf of the Government of West Bengal for the reception, embarkation and disembarkation of pilgrims at Outram Ghat and Man-o-War Jetty. About 14,548 persons attended the Mela. Sanitation on board the vessels which carried pilgrims was checked by the Port Health Officer before embarkation was permitted.

The scheme of pre-entry and periodical examination of seamen, introduced in India in 1950, continued to work smoothly during the period under report. All expenses in connection with the laboratory and other tests necessary in respect of seamen, who were declared temporarily unfit by Medical Officers, Seamen Medical Examination Organisations or Seamen's Clinics or referred by the Medical Appeal Board were met by the Government of India. The I.M.S. (ME) Rules, 1951 were revised and made more precise.

The existing arrangements for hospitalisation of seamen at Bombay and Calcutta were continued without any modifications. Outdoor medical treatment facilities were available to seamen in the Seamen's Clinics at Bombay and Calcutta. These Clinics also carried out laboratory tests for those undergoing treatment thereat. The scope of outdoor treatment facilities of the seamen was extended by providing specialist services in these clinics in respect of eye, ear, nose, throat and dental cases. Convalescent treatment in the Seamen's Clinic, Bombay continued as usual.

The statistics of the work done by the various Port and Airport Health Organisations is given in Table Nos. 62 to 64.

CHAPTER XIII

MEDICAL RESEARCH

CHAPTER XIII

MEDICAL RESEARCH

(i) Indian Council of Medical Research, New Delhi.

The activities of the Council have been expanding steadily since independence. The Council embarked upon a planned development since the beginning of the Second Five Year Plan period. During the year under review substantial headway was made in all fields of activity of the Council. The total expenditure of the Council was about Rs. 48,00,000. The Council financed a large number of research schemes in various research institutions and medical colleges in addition to the extensive projects in the fields of tuberculosis, trachoma and family planning. In the formulation of its programme of research in medical and public health problems of national importance, attention has always been paid by the Council to dovetail its activities with the programme of the Ministry of Health. The subjects taken up for research by the Council covered a wide field and included both fundamental problems as well as problems of applied interest.

Certain important achievements in selected fields are highlighted below:—

Tuberculosis :

A National Tuberculosis Survey was started by the Council in 1955 for determining the precise incidence of the disease in both the urban and rural areas of the country. The survey, which was limited to pulmonary tuberculosis, was completed. Six cities, 30 towns and 151 villages were covered ; the number of persons X-rayed during the study was 2,90,758. The final report of the survey conducted was published. The salient findings of the survey are :—

(1) Prevalence rate for 'active' and 'probably active' tuberculosis varied from 13 to 25 per 1,000 population in cities and towns and villages in different zones;

(2) The rate of bacteriologically positive cases for 1,000 population in these areas ranged from 2 to 8 in cities, towns and villages;

(3) Prevalence rates were lower in females than in males, specially in age groups above 35 years ;

(4) In general, the prevalence rate showed a continuous increase with age;

(5) In cities, higher prevalence among persons living in 'kutcha' houses than among those living in 'pucca' houses indicated the possible effect of economic conditions;

(6) A large majority of 'active' and 'probable active' cases had moderately advanced diseases;

(7) Definite cavitation was observed in 4 to 33 per cent of the 'active' and 'probable active' cases, this percentage was generally lower in cities.

The villages covered by the survey were, however, only those that had roads or tracks for the transport of X-ray vans or were very close to them. These were, therefore, places where there was a possibility of dissemination of the disease through normal channels of communication. But the tuberculosis position in remote villages and mountainous areas is remained to be determined; attempts are, however, being made to survey some of these 'inaccessible' villages by portable X-ray units.

The survey has also shown that the incidence of tuberculosis is significantly higher in the population living in insanitary conditions that in those living in healthier surroundings.

It has also given an indication as to the probable number of infective cases in the country and also the number of 'active' or 'probably active' cases, though all of them may not be infective at present. The estimated number of infective cases is 1·5 million, and that of 'active' or 'probably active' cases is about 5 million. These figures are higher than those roughly estimated previously. They indicate the need to review the methods of combating this menace. While our anti-tuberculosis measures should, in the first instance, be concentrated in urban areas, steps have to be taken to extend them to rural areas at an early date.

Tuberculosis Chemo-therapy Project, Madras :

The Tuberculosis Chemo-therapy Project in Madras was started in 1956 under the auspices of the Indian Council of Medical Research and in collaboration with the WHO and the Government of Madras. The object of the projects is to find out how effectively the new anti-bacterial drugs can be used in treating tuberculosis patients in their homes as against the efficacy of treatment of patients in hospitals. It is also planned to ascerain the prevalence of tuberculosis in family contacts at the time of diagnosis and the subsequent incidence of tuberculosis among them.

It was found that the patients treated at home do as well as those treated in sanatoria, even though the conditions for domiciliary treatment may not be optimum. The incidence of the disease among the contacts of cases treated at home is being studied with a view to evolving suitable measures to prevent such infection. Many interesting observations were made regarding the bacteriology of this disease and an important finding was that several strains of organisms prevalent in the country was not as virulent as those met with the certain other parts of the world.

Leprosy :

In the field of leprosy, the studies conducted during the year under report were again brought into prominence, the importance of treating children with minimal doses of sulphones in order to prevent occurrence of infection among them. This, indeed, is a very significant finding which, if confirmed by further observations, will pave the way for the initiation of a programme for the control of this disease.

Attempts were made at the School of Tropical Medicine, Calcutta to transmit human leprosy infection to laboratory animals like hamstors, white mice and a special breed of hylord black mice. Organisms obtained from leprosy nodules of untreated human cases have been used for primary inoculation. Over a period of many months, black mice developed generalised infection and acid-fast organisms were noted in many of their tissues

and organs. The possibility of contamination by tubercle bacilli or some saprophytic acid-fast organisms were excluded Stenfanski's bacillus which is known to produce fatal infection in rats was also excluded. This is the first time that such results have been reported, but it is obviously necessary to confirm them by further tests in other laboratories.

A number of newer drugs for treatment of leprosy have been tested for their therapeutic value. Some of them are S.U. 1906, diphyenyl thiourea (DPT), acidomycin, pomegranate extract etc. It has been found that S.U. 1906 does produce clinical improvement comparable with that of D.D.S., but it is not superior to the latter in producing bacteriological improvement. Treatment with D.P.T. has also brought about clinical improvement similar to that of D.D.S., but the bacteriological improvement with it has been found to be inferior to that obtained with D.D.S. Acidomycin has been found to be of only a limited therapeutic value in lepromatous cases. Other drugs tested have had no special therapeutic effect.

Pioneering work on the treatment of deformities by suitable operative procedures has been done at Christian Medical College, Vellore. Efforts to develop further operative procedures have been continued and special techniques have been developed for the surgical reconstruction of the foot, the thumb and the nose. As a result of the adoption of these techniques, it can be said that the majority of leprosy deformities, which are not preventable, can at least be corrected. It has been possible to develop a programme of physiotherapy on the basis of the result thus obtained, which may be useful in delimiting secondary deformities and in the correction of existing deformities. A number of suitable splints have been designed and are being manufactured for the purpose.

The basic question, however, is how do these deformities develop? If the mechanism underlying the process of development is known, it will pave the way for developing further ameliorative techniques. Some basic principles of tendon transfer, tendon freegrafting and joint function have been studied in anaesthetic hands and feet and compared with those of healthy subjects. The relative vulnerability of different nerves and different muscles has also been studied. Variation in the temperature over the surface of the body has been considered to be an important factor in the production of deformities. Indeed, the work conducted at the Centre has shown the way for achieving good results not only in the treatment of leprosy deformities but also in the treatment of deformities caused by other paralytic conditions.

Nutrition :

In the field of nutrition attention has been paid to the study of nutritional diseases and disorders. Lathyrism has been investigated in considerable detail and the indications are that manganese content of 'Khesari Dhal' might in some way be responsible for this condition. However, further research is needed in order to confirm or disprove this hypothesis. Surveys on protein malnutrition are under way and a large amount of data has been collected which awaits analysis. Studies on growth and development of Indian children have progressed and shortly there would be enough data to help in fixing norms for Indian children.

The work of the Nutrition Research Laboratories continues along several fronts and has expanded during the period under review. The work is of both fundamental and applied significance and has been pursued in the

field, clinic and laboratory; thus setting a fine example of synthesis of basic and applied science. The laboratories functioning till recently in Coonoor, Nilgiris, were shifted into their own newly constructed buildings on the Osmania University Campus in Hyderabad in December, 1958. The Laboratories now provide increased opportunities for the pursuit of clinical research in human nutrition deficinecy diseases and mal-nutrition which remained somewhat restricted during the year under report at Coonoor. The Government of Hyderabad have placed 32 beds at the disposal of the Laboratories in two hospitals in Hyderabad City for clinical research in nutrition. The details of the work carried out on various problems at the Laboratories are contained in the Annual Reports of the Laboratories which are published every year.

Enquiries from public and Governmental agencies for information and advice on different aspetcs of diet and nutrition were adequately dealt with. The usual summer course in the Laboratories for practical training could not be held during 1959 owing to the shift of the Laboratories. A brochure on 'Menus for Low-Cost Balanced Diets' for use in North India has been published along with the lines similar to those adopted for the brochure prepared for South India. Besides, a large number of papers were published during 1959 by workers of the Laboratories.

Environmental Hygiene and Sanitation :

In envinronmental sanitation, the question of pollution of rivers by industrial wastes has been investigated and in the near future adequate methods for the disposal of industrial wastes particularly those from sugar industry will be available.

Virus Diseases :

In regard to virus diseases, attention has been focussed on the elucidation of the etiological agent responsible for epidemic encephalitis in children. A number of viruses have been isolated and it would appear that in any one area multiple virus agents are responsible for the condition. The work on Kyasanur Forest Disease in Mysore State has been continued, particularly to ascertain the role played by mammals, wild birds, rodents and cattle in the maintenance of infection in nature. During the year under report attempts were made to immunise the population with vaccine prepared from a related strain of the virus. A preliminary analysis of the data obtained has shown that this cavvine does not possess adequate immunising properties. It will be necessary, therefore, to prepare a vaccine from the strain actually present in the region.

Virus Research Centre, Poona :

The Centre took possession of a new three storeyed building in July, 1959 in order to expand its activities.

During the period under review the Virus Research Centre has been principally concerned with the continuation of its investigations of Kyasanur Forest Disease in collaboration with the Directorates of Public Health and Medical Services, Mysore State, Bangalore, although some work has also been done in other areas as well.

A total of 418 cases suspected to be KFD were investigated and 65 of them were diagnosed as KFD with 3 deaths.

Evidence was obtained that mild neurological involvement may occur in KFD during the relapse phase. Relapse occurs in some cases after an afebrile interval of 1 to 3 weeks which is characterized by intense headache and fever associated sometimes with abnormality of reflexes. Microscopic and chemical examination of 3 specimens of CSF during this phase showed increase in cell and protein content. No paralytic incidents were seen.

Virus was almost always isolated from the blood of positive cases, if the sample was taken early in the illness. Of 34 specimens obtained within 6 days of onset 33 were positive for virus. Thirty one positive sera were titrated and the highest titre obtained was 5·0 log Ld 50.

Six of the positive cases were lactating mothers so the possibility of infection of the breast fed child by milk could be examined. Virus could not be isolated from the milk of ill mothers nor wash evidence obtained of the infection of the babies.

The sex ratio (male/female) of proved cases was 2:1 in contrast to 7:1 obtained in the previous two years. The adult male had the highest risk of infection.

Human infection occurred in 16 villages. Of these, infection was recorded in previous years in 7 and 3 others are within the area of known infection in 1958. The remaining 6 villages are contiguous to but outside the area of known infection of 1958.

In addition to the progress made in the fields mentioned above, basic and fundamental research has been carried out and many problems in physiology, pathology, bacteriology and clinical medicines have been investigated in different medical colleges in the country with grants from the Council.

Trachoma :

The programmes initiated during the previous years were followed up. Work in the State of Rajasthan was started in January, 1959 and was launched among the pre-school age children of 40 villages in Sanganer Community Development Block in Jaipur District. Treatment instituted was of intermittent type, spread over a period of six months from March to August. Re-examination was carried out in September-October, 1959. In the State of Punjab 61 primary schools from Patiala district were brought within the scope of this programme. The active trachoma cases were divided into main groups which were further sub-divided into two sub-groups from each of the main groups which was placed under treatment. The total number of active trachoma cases were 2,000.

The results obtained showed that :—

(1) the majority of cases belonged to trachoma stage III;

(2) there was no significant difference in the effect of treatment between dresser-treated group and teacher-treated group;

(3) the treatment schedule resulted in a cure or improvement rate of 75 per cent ;

(4) the relapses, as ascertained by follow up studies in two groups, were found to be between 4 to 5 per cent ; and

(5) in the control groups, the cases resulting in spontaneous cure average about 27·8 per cent and 22·2 per cent showed improvement at the end of the follow-up period.

The other activity during this period has been to carry out surveys to establish the geographical distribution of trachoma and other commonly occurring eye diseases in the country. Surveys in the rural areas in the States of Madhya Pradesh, Kerala, Mysore, Assam, Bihar, West Bengal, Jammu and Kashmir have been initiated.

Drug Research :

Drug research has been carried out by the special units established by the Council in different centres. A large number of indigenous plants have been screened and work is still in progress. Besides, studies were carried out on the anti-veratrinic, anti-accelerator and anti-arrhythimic activities of indigenous any synthetic drugs and on action of anaesthetics and pre-anaesthetics on cardiac automaticity and conductivity. The object of the former trials has been to look for a drug or combination of drugs from amongst indigenous and synthetic drugs the action of which should be superior to that of quinidine known to be useful in dealing with cardiac arrhythmias. Results of this work have been encouraging and new vistas of approach have opened up for the study of anti-arrhythmic drugs. Further work is in progress.

Research is being pursued in some important aspects of physiology *e.g.,* endocrinology, hypothermia etc.

Dental Health :

The Council has been supporting a number of studies in the dental field. A study has been under way at Lucknow in the development and growth of dentition of Indian children. Studies on the prevalence of periodontal disease are also in progress. An effort at evaluation of traumatogenic occulsion as an etiological factor in periodontal disturbances has been made with a view to evaluate the character of traumatogenic stresses and their relationship to periodontal disturbances. Investigations have also been carried out to gauge the value of various types of endodental treatment of the abscessed, pulpless, deciduous and young permanent teeth.

Maternal and Child Health :

The Council has been paying special attention to the elucidation of problems which have a direct bearing on the health of mothers and children. To illustrate the nature of work being done, mention may be made of some of the subjects which have been and are under investigation. Studies have been in progress on the incidence of intra-natal and early rickets, incidence and nature of infections and afflictions of infants and pre-school children and mortality and morbidity in peri-natal period. Investigations are also in progress to determine the incidence and nature of worm infestation in children, in women, the role of edocrines in pregnancy, specially in relation to toxaemias of pregnancy and osteomalacia is under investigation. The influence of RH factor in relation to toxaemias of pregnancy, still births, neo-natal deaths and haemorrhagic diseases of the new born has also been studied. In addition to, radiological and electro cardiographic changes in pregnancy and structural and functional adaptation of kidneys in pregnancy have also been receiving consideration.

Training:

The training programmes of research workers were continued during the year under review. A number of fellowships were awarded for training of junior members of the staff of medical colleges in methods of teaching and research. Considerable headway has also been made in the initiation of young workers into the methods of research by their appointment as research fellows on short-term and long-term research projects.

(ii) Central Drugs Laboratory, Calcutta.

The Central Drugs Laboratory, Calcutta is a statutory new set up under the Drugs Act, 1940 to analyse or test such samples of drugs as may be sent to it under the various provisions of the Act and the rules made thereunder and to carry out such other duties as may be entrusted to it by the Central Government or with the permission of the Central Government by the State Government after consultation with the Drugs Technical Advisory Board. Besides acting as the official referee in matters of dispute regarding the composition of drugs when these are referred to the laboratory by the Collectors of the Courts of Law and Customs, it also acts as the Analytical Laboratory under the Drugs Act for those States which have no laboratory facilities of their own. 4,464 samples were received in the laboratory for testing during the year under report. 4,168 samples were analysed of which 3,624 samples were found conforming to the standard specifications. The number of bacteriological examinations etc., and the other samples tested in different sections of the Central Drugs Laboratory during the period under report are given in Table Nos. 65 and 66.

The training of the candidates sponsored by the State Governments as well as from the trade in analytical work was undertaken by the Central Drugs Laboratory, where two candidates were trained in Bio-chemistry and Pharmacology and Bioassay during the year under review.

During 1959, apart from primary functions of Drugs Control and Drugs Standardisation, research and development work on different subjects were undertaken in various technical sections of this laboratory. The work was continued during the year under review on evolving new methods or improving the existing ones, in view of the current difficulties and handicaps in the existing methods of drugs standardisation. Work was also started on the establishment of National Subsidiary Biological standard for various drugs for which a standard sample was frequently required for comparative evaluation of potency of samples received under the Drugs Act or from trade. Considering that International Drug Standards and similar national Drug Standards of other foreign countries (U.K. and U.S.A.) were not easily available in time and in sufficient quantity, it was decided that to meet the need of Indian industry, trade, Government and Private Laboratories, Indian National Subsidiary Standards of certain important drugs may be formulated at this laboratory. Keeping in view the demand, it was decided that work should first be started on digitalis, pheroxy-methyl-penicillin, insulin tetracyline and posterior pituitary extract. Sources of supply of authentic samples of above drugs, both in India and abroad were contacted and in a few cases sufficient quantity of high potency samples were obtained. The work on their standardisation was taken up individually and in collaboration with different sections of this laboratory.

As a result of certain resolutions passed by the Second Analysts' Conference, work was undertaken in different sections of the laboratory on life period of different anti-biotic, vitamins and their preparations when stored at different temperature for various length of time. In these studies, the stored drugs were tested at fixed intervals of time and trend in the quality of the products noted, such studies of course require sufficiently long period of observation to reach the final conclusion and hence the studies were continued.

In the Pharmaceutical Chemistry Section, the following research on Drugs Standardisation was carried out :—

(1) Assay of Noradrenaline Bitartrate Injections.

(2) Assay of spearmint Oil.

(3) Bactriostatic agent in Milk of Magnesia.

(4) Belladona Plaster.

(5) Eye lotions containing a mixture of dyes.

(6) Analysis of Gripe Mixtures.

(7) Separation of Chloramphenicol and Dihydrostreptomycin Sulphate in mixtures.

(8) Separation of P.A.S. acid in complex mixture containing vitamins, phosphates, colouring matters etc., and

(9) Separation of quinine in a mixture of aspirin, phenacetin, caffeine and quinine.

During the year under report the working standards were developed in the laboratory of "Phenoxy-methyl-penicillin" and "Tetracycline Hydrochloride" received through the courtesy of Hindusthan Antibiotics Ltd., Pimpri and Cyanamind International, U.S.A. respectively.

It may be mentioned that collaborative study on like period of vitamin B12 ampoules indicated a slight loss in potency.

The research on Drugs Standardisation in the Bio-chemistry Section was mainly on the following subjects :—

(a) Assay of Vitamin A (Spectrophotometric vs colorimetric method).

(b) Chromatographic study with Fish Liver Oils.

(c) Bioassay of Vitamin A.

(d) Assay of Vitamin D in injection of Colloidal Calcium with Vitamin D.

(e) Estimate of ascorbic acid in adrenal glands.

(f) Determination of enzyme activity in Pharmaceutical preparations.

In connection with the comprehensive programme for the maintenance of National Biological Standards in the Central Drugs Laboratory, insulin was selected for study during the year under review.

A collaborative study was in progress during the year under report to evaluate the stability of some water-soluble vitamins *viz.*, Ascorbic acid, Nicotinic acid, Nicotinamide, Riboflavin, Vitamin V, Folic acid and Cyanocolbalamin during 2 years storage.

In the Pharmacology Section, research on drugs standardisation and related problems were carried out. Several preparations of Iron Dextran compound intended for intramuscular use have been evaluated and an exhaustive study of toxicity of the products was undertaken. The investigation of the role of adrenal cortical hormoe in allergy continued. Extracts of the leaves of Dillenia Indica Linn, considered by the Ayurvedic System of Medicine, to have some adverse effect on fertility was investigated by this section on rats but it was indicated that oral administration of the extract has some favourable effect on fertility rather than any adverse effect.

In the Bacteriological Section, studies on anti-microbral property of certain herbs and the sensitivity of Vib. Cholera strains to chloramphenicol was undertaken.

The action of the Vitamin C and nicotinic acid with penicillin was studied during the year under report. The combination of penicillin with thiamine and riboflavin was also studied to find out whether such a combination helps or retards the activity of the antibiotics.

The work on standardisation of Indian Pharmacopoeial Drugs were carried out by the Pharmacognosy Section. Additional data for crude drugs in Kureli, Vasaka, Alstonia, Belae fructus. Ayapanna, Asoka, Kaladana and Chirata were completed in connection with work of revision of some monographs of the Indian Pharmacopoeia. The pharmacognostic characteristics of the above drugs were also studied and the distinguishing features noted.

The work was also undertaken by this laboratory for preparation of National Standards of Digitalis from the samples of powdered digitalis leaves obtained from Indian Medicinal Plant cultivation, West Bengal and Government Cinchona Plantation, Nilgiris. Of these the sample from West Bengal was found to be below the specification of the International Standard, whereas the sample from Nilgiris was found to possess approximately the requisite potencies.

(iii) The School of Tropical Medicine, Calcutta.

During the year 1959, the School of Tropical Medicine, Calcutta continued its extensive activities on research, post-graduate training and medical relief. The systematic courses of lectures and clinics on tropical medicine spread over the year were given to the D.T.M.H. and L.T.M. students. Special classes were also arranged for Dietetics and Industrial Hygiene Courses of the All India Institute of Hygiene and Public Health, Calcutta. The laboratory examinations were also carried out in connection with "research" and "routine" activities.

The brief outlines of important research activities on different projects are stated below :—

Amoebiasis :

The effect of a number of drugs *viz.*, Emetive-Bismath Iodide, Ipecac-Bismath Iodide, Carbarsone, Kurchi-Bismath Iodide, Mebinol V, Enterovioform and Humatin, given orally or by tube was observed in 63 infected guinea pig and the results (failure, response and recurrence) were noted indicating that the experiment set up with the conveniently controlled amoebic infection made available, suits well the requirements for the evaluation of amoebicidal drugs.

Diabetes :

Twenty rats that survived after alloxan injection, having blood sugar above 0·2 per cent and persistent glycosuria, were studied to see the effect of hepatotoxic substance. The blood sugar was reduced or even normalised in some of them after an injection of carbon tetrachloride, 0·075 ml. subentaeroms and apparent beneficial effect was surprisingly maintained for 6 to 8 months. Histological study of the liver showed normal appearance with regenerative activity and glycogen content of liver cells was either normal or low normal.

The high protein diet on the diabetic rats appeared to high fat and usual laboratory diet. They lived longer and the blood sugar was lower than the control group.

Tropical Eosinophila :

It was reported in 1958 that the ingestion of embryonated eggs of *Ascaris Lumbricoides* causes temporary eosinophilia. During the year under review, a human volunteer was given by mouth 100 (appn) embryonated eggs of *TOXOCARE CANIS* suspended in normal saline. The eosinophilic count varied between 51 and 59 per cent with a WBC count of 12,200/c.mm. and 14,000/c.mm. Absolute eosiophil counts were 5,000 to 8,000/c.mm. He later developed respiratory symptoms which along with persistent massive eosinophilia stimulated tropical eosinophilis. The case was followed up.

Protein metabolism in undernourished and malnourished children :

From a study of 250 under-nourished and mal-nourished children the four clinical types *viz.*, marasmus, classical kwashiorkor, marasmic kwashiorkor and kwashiorkor without dermatosis appear to be essentially manifestations of protein and caloric malnutrition influenced and modified by a number of other factors. Clinical trial with two protein-rich vegetable foods, prepared by the Central Food Technological Institute, Mysore as compared to skimmed milk were carried out. It was observed that the vegetable food appeared to be useful in relatively milder cases. Regarding efficacy they are inferior to milk in the rate of regeneration of serum almumin.

Other studies carried out in the School during the year under report included were :—

(1) Control of massive haematemes in portal hypertension by using Sengstaken Oesophageal tube.
(2) Effect of smoking on gastric acid secretion.
(3) Small intestine biopsy with crobsy capsule.
(4) Liver biopsy in different tropical diseases.
(5) Clinical investigations of infective hepatitis and cirrhosis.
(6) Examination of duodenal contents for parasites.
(7) Electro cardiographic changes in monkeys after argemone administration.

(iv) Vallabhbhai Patel Chest Institute, Delhi.

The Vallabhbhai Patel Chest Institute, Delhi was established by the University of Delhi in 1953 with financial assistance given by the Government of India in the Ministry of Health. By a resolution of the Governing

Body, "A National Institute for Teaching and Research in Chest and allied Diseases" was added to the existing name of the Institute in order to indicate the scope and function of the Institute. Two new departments were added to the Institute *viz.*, Mycology and Pneumoconiosis. The following research projects were under way at the Institute :—

(1) Objective differentiation between chronic bronchitis and emphysema by pulmonary function tests;

(2) Vascular pressure studies in pulmonary diseases by cardiac catheterisation;

(3) Experimental pulmonary hypertension;

(4) Evaluation of IPPB in the treatment of emphysema;

(5) Clinico-pathological study of bronchiectasis;

(6) Pathogenesis of emphysema—A clinico-pathological studies;

(7) Immunological studies of sputum and estimation of C-reactive protein in respiratory allergy and chronic infections of the upper respiratory tract;

(8) The role of endocrines in allergy;

(9) Cultural collection and differential analysis of Indian mycobacteria;

(10) Incidence of Klebsiella in throats of normal population;

(11) Incidence of Candida species in throat swab and also in sputum in bronco-pulmonary diseases;

(12) Incidence of histoplasmosis and histoplasm survey in Delhi and Greater Delhi;

(13) Allergic reaction due to streptomycin corroboration of clinical findings with streptomycin skin test;

(14) Pulmonary Eosinophilosis and the role of eosinophil cells;

(15) Sensitivity of Indian strains of tubercle bacilli for compound 1314;

(16) Effect of ambulation on experimental tuberculosis;

(17) Fatty acid metabolism on experimental tuberculosis;

(18) Iodine metabolism in human tuberculosis ;

(19) Study of blood volume using iodinated human serum albumin ;

(20) Paper electrophoresis of serum protein as a potential prognostic aid in tuberculosis;

(21) Pathological changes in the liver of wild rats in Delhi-Pathological studies;

(22) Early tissue reaction in guinea pig lungs to the introduction of live virulent tubercle bacilli by the nasal route in vaccinated and non-vaccinated animals;

(23) Histopathological study of bronchiectatic lung;

(24) Pathogenesis of emphysema—an experimental study in guinea pigs;

(25) A histopathological study of resected tuberculous lungs;

(26) Animal reservior of human pathogenic fungi;

(27) Study of dermatophytes from soil;

(28) Comparison of open circuit and closed circuit method for finding of functional residual capacity;

(29) Pulmonary functions study in cases of chronic and parenial bronchial asthma;

(30) Metabolism of radio active acetate in experimental tuberculosis; and

(31) Effect of senescence on pulmonary functions.

In addition to the above research projects, work on the following research schemes sanctioned by the Indian Council of Medical Research, New Delhi were in progress:—

(1) Study of certain bio-chemical aspects of human leucocytes in health and diseases;

(2) Bagassosis;

(3) Pollination calendar for greater Delhi;

(4) Pharmacological studies of a new anti-tubercular antibiotic;

(5) Experimental studies on the production of hypersensitivity; and

(6) Study of altiology of and pathways of iodine metabolism in endemic goitre. (A joint project conducted at the Institute and the All India Institute of Medical Sciences).

The following research schemes sanctioned by the Council of Scientific and Industrial Research were in progress at the Institute:—

(1) Bio-chemical changes produced in hyper and hypothermia;

(2) Preparation and biological testing of usnic acid its derivatives for therapy in tuberculosis; and

(3) To find out a cheaper and better medium for a new anti-tubercular antibiotic.

The 13th post-graduate Diploma Course in Tuberculous Diseases (D.T.D.) commenced from the 12th January, 1959 with 20 students admitted from various parts of the country. 16 students passed the examination during the year under report. The third Medical Laboratory Technology Courses (M.L.T.) commenced from 1st July, 1959. Out of the 10 admitted, 3 students discontinued their studies. The University of Delhi instituted the certificate course in Medical Laboratory Technology in 1959 which was hitherto only a course of the Institute.

The Institute continued to provide facilities for research to some of the candidates registered for M.D. at the University of Delhi. Four research fellows under the Government of India and one doctor from Kerala State were working for post-graduate studies in medicine (M.D.). Four persons attached to the Institute for research work were admitted to Ph.D Course in various subjects *e.g.,* Medicine, Bio-chemistry, Mycology and Botany.

Research:

Under the up-grading programme of the Government of India, Ministry of Health, two research fellows were admitted to the Institute.

The Council of Scientific and Industrial Research, New Delhi continued the research fellowship in Bio-chemistry during the year under review. The Council also sanctioned a grant for a new anti-tubercular anti-biotic.

The Indian Council of Medical Research offered a research fellowship for study on certain bio-chemical aspects of human leucocytes in health and diseases. The Council also sanctioned a research fellowship on experimental studies in the production of hypersensitivity in animals under different conditions of endocrine metabolism.

In order to find out whether the so called atypical acid fast bacilli known to cause tuberculosis in other countries exist in India or not, the laboratory was set up by Dr. Emil Pogen, Clinical Professaor of Infectious Diseases, University of California and Head Pythologist, Olive View Sanatorium, California and an eminent Bacteriologist was assigned to this Institute for a short period of 9 months under the "Full Bright Educational Foundation Programme". During the year under report, he collected 560 strains which were analysed and studied in this unique laboratory of the Institute.

The Institute added two new research departments *viz.*, Department of Mycology and Department of Pneumoconiosis to its existing other five departments *viz.*, Bacteriology, Pathology, Cardio-Respiratory Physiology, Bio-chemistry and Clinical Research.

The Department of Clinical Research, which comprises of (i) Diagnostic Clinic (ii) Allergy Clinic (iii) Bronchitis and Emphysema Clinic Cardia Clinic (iv) Pulmonary Eosinoplilosis Clinic opened by the President in 1957, continued to work under different fields of enquiry namely Respiratory Allergy, Pulmonary Role of Endocrine in Hyper-sensitivity Asthama and leaderlyn therapeutic trials etc.

The Cardiac Catheterisation Laboratory was set up with the most up-to-date equipment with a view to studying pressure and blood gas changes in the various chambers of the heart and the pulmonary vascular bed.

A Radio Isotop Section was set up with the aid of equipment received from the T.C.M. The equipment was used mainly for the diagnosis of Thyroid Disorder by the Radio-active Iodine Uptake Method and for measurement of blood volume using iodinated human serum albumin. Sodium 24 was used for the first time in India in this Institute for the measurement of pulmonary circulation time in patients.

The Institute made use of cobalt-60 irradiation facility provided by the U.S. Atomic Energy Pavillion in the World Agricultural Fair in Delhi in 1959 for the study of biological effect of radiation.

For the purpose of facilitating training in non-tuberculise chest diseases and conducting research on chest problems it was considered essential to have a self contained chest hospital of at least 40 beds. On this basis the governing body of the Institute approved of the certain development schemes during 1959 for inclusion in their Third Five Year Plan period.

(v) Nutrition Research Laboratories, Hyderabad.

The Nutrition Research Laboratories, till recently functioning at Coonoor for the last 33 years, were shifted to their own newly constructed buildings on the campus of the Osmania University, Hyderabad.

Studies on Proteins :

The nutritive value of Kodra (Paspalum scrobiculatum) protein alone and after supplementation with Bengal gram and amaranath, fed at 10 per cent protein level, was investigated. The supplementary effect of pulse and amaranath was significant.

Protein metabolism was found to be disturbed in severe deficiency of riboflavin; utilisation of riboflavin also suffered in severe deficiency of

protein. The xanthine oxidase activity in liver was not affected at any of the levels dietary riboflavin. At low protein intakes excessive intake of riboflavin might be harmful.

Iron Metabolism :

Iron in thermal sweat: The concentration of iron in cell rich sweat showed wide variations which were less pronounced in cell free sweat. The iron content of cell rich sweat was significantly reduced in iron deficiency anaemia. Iron disappeared almost completely from cell free sweat; it reappeared, however, when haemoglobin levels rose under treatment. It was found that in advanced iron deficiency, skin and sweat glands played a prominent role in limiting excretion of iron and thus conserving the meagre reserves of the body. The pattern of iron excretion in sweat returns to normal when the haematological status of the individual also returns to normal.

Studies on Vitamins :

1. *Urinary excretion of thiamine :* The excretion levels observed in patients with signs and symptoms suggestive of thiamine deficiency were compared with those obtained in apparently normal subjects belonging to the same socio-economic group.

2. *Species differences in pyridine nuelcotide synthesis by erythrocytes :* It was earlier reported that out of the seven species studied only human and guinea pig erythrocytes were found capable of synthesizing pyridine nucleotide from nicotinamide. Further experiments were undertaken to study the mechanism of PN synthesis *in vitro* by the RBC. Second pathway of PN synthesis from nicotinic acid appeared to be physiologically more important.

3. *Pyridoxine deficiency :* The influence of dietary level of tryptophan, with and without pyridoxine, on the PN levels of blood and liver of animals given subcutaneous injections of nicotinamide and trytophan were studied.

4. *Vitamin D :* Observations on the healing of rachitic cartilage in low phosphorus diets were extended to low calcium rickets in experimental animals.

A significant fall in the hexosamine content of the rachitic cartilage on treatment with vitamin D was observed. On the other hand, the capacity of such cartilage to synthesize hexosamine seemed to be significantly enhanced during healing under the influence of vitamin D.

Nutrition in pregnancy and lactation :

Changes in body weight and body composition : The changes in body, weight and body composition in pregnancy were studied. The results showed that the age of the subject and the initial body weight did not appear to influence the weight increase during pregnancy in the 12th week.

Basal metabolism in nursing mothers : The body composition and basal metabolism of 14 nursing mothers were studied. The total body water formed 59·2 per cent of the body weight and was less than that reported for Indian male adults. The subjects consumed more oxygen when expressed both on the basis of cell solids and body surface. This excess consumption is presumably due to the needs of milk production.

Clinical Investigations :

Investigations on clinical trials with vegetable protein foods in kwashiorkor cases were extended. It would seem that vegetable protein diets of the types used were nearly as effective in controlling the clinical manifestation of protein mal-nutrition in children as diets based on skim milk. It should, however, be mentioned that vegetable protein diets were generally inferior to skim milk with regard to serum albumin regeneration. The lower rate of serum albumin regeneration on vegetable protein diets can be overcome by either prolonging the treatment or by increasing the daily intake. The latter course is not to be recommended as it may involve considerable digestive strain.

Renal function in nutritional oedema : The assessment of the extent, if any, to which altered kidney function participated in oedema formation was undertaken.

Coronary heart diseases and factors relating to atherosclerosis : A survey of the incidence of coronary heart diseases and factors relating to atherosclerosis was conducted on 580 subjects.

Dietary fats and bile acids : The role of polyunsaturated fatty acids in depressing serum cholesterol concentration was investigated. The effects of two different fats, one rich in essential fatty acids and the other poor in E.F.A. on the faecal bile acid excretion were studied.

Pathology :

The effect of liver of super-imposing deficiency of calories on those of proteins was studied. It was found that the liver injury was much less in evidence in calorie restricted group than in protein restricted group.

Field Investigations :

Aanemia in women of child bearing age were studied, primarily to define the general incidence and frequency of different types of anaemia and to carry out certain therapeutic trials in the field with a view to formulating control measures on a wider scale. Diet surveys amongst them revealed a low intake of calories, proteins vitamins A and C; the average intake of iron was 13 mg. per day. Poor diets and hookworm infestation appeared to be the possible etiological factors.

Field trials with protein rich foods : Feeding trials with protein rich foods in combating protein malnutrition in children were conducted for 240 days, excluding Sundays. Protein rich foods, whether based on skim milk or other source of vegetable proteins, were found to significantly augment the growth performance of children.

Growth and physical development of Indian Children : During the year under review, 6,136 children from the States of Kerala, Madras and Andhra Pradesh were examined. This was in addition to 5,707 examined in the previous year. Thus a total of 11,843 children were covered. Children from the urban areas were physically superior to children from rural areas with the semi-urban children coming in between. Boys, in general, have higher average values for all linear measurements and body weight up to 12 years.

The energy cost of activities in two industrial areas Ahmedabad and Coimbatore showed that values in Ahmedabad were consistently higher by about 15 per cent on an average than Coimbatore workers.

(vi) Central Leprosy Teaching and Research Institute, Chingleput, Madras.

The Institute comprises of the Lady Willingdon Leprosy Sanatorium at Tirumani in Chingleput District and the Silver Jubilee Children's Clinic at Saidapet in Madras, both of which were under the charge of the Director of the Institute.

Institute at Tirumani : The activities of the institute include treatment of in-patients and out-patients, research, teaching, physiotherapy and welfare-*cum*-occupational activities for in-patients.

The total bed strength of the institution continued to be 884 during 1959. All in-patients, excepting those admitted for temporary alleviation of acute symptoms, were treated with parent sulphone (DDS) by mouth. Intradermal injection of esters of hyonocarpus oil were given to the patients with residual hypopegmented patches over the body. During 1959, the number of patients admitted were 574 and the number of patients remaining at the end of previous year was 817 so that the total number of in-patients treated during the year was 1,391. 200 operations of both septic and clean (Aseptic) cases were performed in the hospitals during the year 1959.

A number of leprosy patients were found to be suffering from tuberculosis also. 24 such patients including two extrapulmonary tuberculosis were under treatment for tuberculosis combined with the routine treatment of leprosy with sulphone.

In the out-patient clinic, 3,599 cases attended for consultation advice and treatment.

The activities of the Mobile Unit continued to show improvement during the year 1959. The unit had run 14 clinics directly under it and 3 clinics under others, which received help of Mobile Units by way of medicines etc.

Research :

At the Institute the research activities were concerned mostly with therapeutic trials; field studies in certain aspects of epidemiology of the disease and in prophylactic use of sulphones, were carried out at the Saidapet Clinic. Trials were continued with the use of D.P.T. (S.U. 1906) for treatment of Leprosy; Etisul, a new anti-leprosy drug used by inunction for treatment of the disease; and Chloroquine, an anti-malarial drug for the treatment of lepra reaction.

D.P.T. (S.U. 1906) :

From the studies and investigations conducted during the year 1959, it was observed that :—

(i) D.P.T. is effective in the treatment of leprosy and the degree of efficacy is about the same as that of D.D.S.;

(ii) The combination of D.P.T. and D.D.S. does not appear to have any advantage over these drugs used singly;

(iii) D.P.T. may be of value in the treatment of cases which are intolerant to D.D.S.; and

(iv) D.P.T. is a very useful addition to the existing anti-leprosy drugs.

Etisul :

Trials were conducted with Diethyl Dithiol Isophthalate (Etisul I.C.I.) in the treatment of leprosy. It is a derivative of Ettyl Marcaptan and is an ester formed from Isophtualic Acid and Ethyl Marcaptan. It is unsintable for administration either by mouth or by injection, but is readily absorved after inunction, and that is the route by which it is given. Very encouraging results were reported with its use specially in combination with D.D.S. and D.P.T., the bacteriological improvement having been much more rapid with D.D.S. or D.D.T. alone.

During the year 1959, trials with Etisul were made in this Institute and it was found in the investigation that Etisul either alone or in combination with D.D.S. was not found to produce any accelerated improvement in the bacteriological index of patients under treatment, neither has it been found to produce any accelerated clinical improvement except in the two cases with nodulation in which subsidence of nodular lesions was seen, but the nodules began to reappear after five months treatment.

Chloroquine in the treatment of Lepra reaction : Some workers reported favourably on the use of chloroquine—an anti-malarial drug—in the treatment of lepra reactions. Its effect in the treatment of this condition was, therefore, investigated on in-patients hospitalised for this complication. A trial was also made on out-patients suffering from this condition at the Saidapet Clinic. It was found that chloroquine was effective in the treatment of lepra reaction in two third of the cases in which it was tried. As compared with Pot Antimony Tartarate, which at present constitutes the routine treatment for this condition. Chloroquine appears to be less effective.

Teaching :

During the year under review, 27 Health and Sanitary Inspectors in 4 batches deputed by the Madras Government received training in Leprosy. One doctor, a W.H.O. fellow from Thailand, was deputed at the Institute for 2 weeks' study. Dr. H. Redlich, a fellow under Indo-German Industrial Co-operation Scheme was deputed by the Government of India in the Ministry of Scientific Research and Cultural Affairs for study of leprosy.

One of the main functions of the department of "Industrial Section" of the Institute is to provide occupational therapy and training for rehabilitation of the patients. This department comprises of several Sections *viz.*, Carpentry, Blacksmithy, Weaving, Cobblery, Book Binding, where patients were employed on daily wages. During the year under report work orders to the value of Rs. 11,225 were turned out. As in the case of the Industrial Section, the Agricultural Farm also provided facilities for work and rehabilitation of the patients.

In the Silver Jubilee Children's Clinic, Saidapet, the activities during the year 1959 continued to be in the nature of :—

(1) Specific anti-leprosy treatment, treatment of complications of leprosy, treatment of inter-current illness in leprosy and physiotherapy ;

(2) Investigation of DDS prophylaxis in child contacts continued and trial of the chloroquine sulphate in the treatment of lepra reactions was initiated during the year under review.

Training :

Four batches of Health Inspectors were deputed for leprosy training for two weeks each at this clinic. Clinical demonstrations followed by lectures on control of leprosy were given to 20 batches of medical and paramedical personnel during the year under report.

(vii) Virus Research Centre, Poona.

The Virus Research Centre, Poona is jointly maintained by the Indian Council of Medical Research and the Rockefeller Foundation. During the year 1959, the Virus Research Centre had been principally concerned with the continuation of its investigation of Kyasanur Forest Disease in collaboration with the Dtes. of Medical and Public Health Services, Mysore State, Bangalore although works had been done on other projects as well. A major difficulty hampering the work of the Centre during the year under report was the inability to control an infection of uncertain etiology which was recognised in the mouse colony some time ago. The colony was, therefore, destroyed and fresh breeding stock obtained from the Virus Laboratories of the Rockfeller Foundation in New York. During July, 1959, the Virus Research Centre took possession of a new wing. Various difficulties were encountered in moving into the utilizing the new space due to technical construction problems.

The activities of the Virus Research Centre were only concerned with research work so that the centre did not make routine examination of materials collected from outside except by its own organisation.

The 1959 epidemic season was a recurrence of KFD among human beings in the known epidemic area and several adjacent villages. The incidence of the disease in man was approximately of the same order as was seen in the years 1957 and 1958. Monkeys continued to die in a large number in the known epidemic area and in the adjacent forests. Confirmation of the presence of KFD virus was obtained in two areas, one some 35 miles North-West of the Centre of the established epidemic area and one some 100 miles to the South-East.

For the first time KFD virus was isolated from pools of apparently unfed larval ticks indicating transovarial passage of the virus, although the significance of this phenomenon for survival of the virus in nature remains to be assessed. Added evidence of the probable pre-eminence of *Haemaphysalis Spingera* as the vector of KFD virus in the epidemic area was obtained.

A slowly emerging concept is that KFD may exist in India in a series of scattered pockets, primarily as an infection of various wild animals and birds with only occasional spill over into man under circumstances where his occupation may expose him to tick bite and the ticks of the area concerned feed on a diversity of reservoir hosts and also man. Work continued in studying the effect of the virus of Kyasanur Forest Disease in animals in the laboratory. The main experiments were conducted in monkeys (Macaca Radiata), since in the previous experiments it was shown that this species of monkey was very susceptible to infection with KFD virus. Leucopenia and the thrombocytopenia shown to them when infected with KFD virus were similar to those seen in human beings. The effect of infection with KFD virus in rats (*Rattus Blanfordi and Rattus Rattens Wroughtoni*) and squirrels (Funambulus) were studied during the year 1959.

The squirrel that survived infection showed anti-bodies against the KFD virus. Very high titres of virus could be demonstrated in their blood at the height of the illness.

In September, 1959, a further visit was made to Kutiyana (Saurashtra) to attempt to find some common factor in the history of persons with RSSE/KFD anti-bodies and to obtain serum specimens from contacts and others who might be involved through the epidemiological leads which might develop.

Other Studies: During the year under report, a survey was carried on and rectal swabs and salivary gland suspensions from wild monkeys were tested for the presence of viruses other than KFD. An investigation was also made to see if the disease termed Bovin Paraplegia which was endemic in the Malnad of Mysore State is of viral etiology. No viral agent was isolated and this work was terminated.

During the year 1959, work continued in the Virus Research Centre on the identification of Enteric Viruses isolated from the previous years' epidemic of encephalitis at Nagpur. Apart from 15 agents not yet identified the score was as follows:—

Virus	No. of isolates
1. Polio I	1
2. Polio II	1
3. Coxsackie B-4	1
4. Coxsackie A-9	2
5. Echo 1 or 8	10
6. Echo 11	2

Insufficient convalescent sera was collected to establish any of the above enumerated viruses as the etiological agent or agents responsible for the encephalitis epidemic.

(viii) Haffkine Institute, Bombay.

The year 1959 is the year of Diamond Jubilee of the present premises of the Haffkine Institute. The occasion was celebrated on 10th January, 1959. The President of the Indian Union Dr. Rajendra Prasad graced the occasion as the Chief Guest. The inauguration ceremony was held under the Presidentship of Governor of Bombay, Shri Sri Prakasa. A three-day scientific session was held and symposia were arranged on the subject of Plague, Cholera, Neuro-venoms. Elaborate arrangements for conduct of scientific meetings, social occasions, entertainment programmes, scientific trips, popular lectures etc., were made.

The Advisory Committee of the Haffkine Institute continued to give guidance and a number of useful recommendations had received consideration of the Government. During the Diamond Jubilee the Government created Haffkine Institute Research and Development Fund for promoting research and development at the Haffkine Institute. The Technicians' Training Programme and other Short-term Courses continued to function as in the previous year.

Department of Anti-toxins and Sera :

The Department of Anti-toxins and Sera has been experiencing for the last few years the pressing need for the expansion of its activities. During the year under report, the Government has been very actively considering the development of Pimpri Farm into a full fledged Laboratory for the purpose of sera production.

The Department also participated in the general Technicians' Training Programme of the Institute and has also given "advanced training" in the production and standardization of various anti-toxins to one student who showed interest in the work. Inspite of the peak production activities, it is heartening to note that the high standard of products and research activities were maintained.

As regards the research activities, attempt is directed to use cholera vaccine as prepared in the Vaccine Department for the studies of antigenic composition.

Use of submerged or shaken cultures for growing Diphtheria and Pertussis : In view of the encouraging reports in the literature on the use of these methods for better yields of Diphtheria toxins and Pertussis growths, attempts were made for utilization of the technique here.

Purification of Rabies Virus : Sheep brain infected with rabies virus was the material used. This infected sheep brain, after being suspended in 0·25 M sucrose solution was subjected to differential centrifugalization. The virus was found to sediment with mitochondria form which it could be separated by alternate freezing and thawing and finally precipitated with sodium sulphate.

Neurotoxic Action of Venoms and Correlation with Electrophoretic Component or Enzyme Action : With the help of starch gel electrophoresis and staining, components of cobra venom were studied. The following studies were continued during the year under review:—Enzyme Composition of Venoms, Purification of Anti-sera by 'Phenol' Method, Purification of Anti-coagulant Factor of Cobra Venom, Neutralization of Toxicity of Russell's viper venom by Heparin and EDTA and Purification of Anti-sera by Pepsin Digestion.

1,476 litres of concentrated serum was produced. This was made up of 1017·3 litres of Tetanus anti-toxin, 101·4 litres of Diphtheria anti-toxin, 53·5 litres of Gas-gangrene anti-toxin, 298·7 litres of Anti-venene and 5 litres of anti-rabic serum.

Department of Chemotherapy :

During the period under review 2 more students were registered for post-graduate degree of M.Sc. in Organic Chemistry and also 4 students were registered for Ph.D. degree. Two Unichem Research Scholarships continued to be operative in the department. 12 paid trainees were given training at this department during the period under review. The department also participated in the Technicians' Training Course conducted at the Institute during the year under review.

As regards the research activities, synthesis of compounds of possible Anti-tubercular activity, Chemotherapy of Bacterial Infections, Pyrazole and Pyrazolone derivatives as possible, Anti-convulsant Agents, Compounds of

possible oral diuretic activity, Synthesis of compounds of possible anti-diabetic activity, studies on the insulin contents of pancreas available from the Bombay Slaughter House and Biological Testing in vitro testing against Tuberculosis, were taken.

The department continued to manufacture and supply Vitamin, Sulpha drugs and quinine preparations to the hospitals and dispensaries of the Government and Municipalities and to Employees' State Insurance Scheme. All the demands were fully met. Table No. 67 shows the products supplied during the period under review.

Department of Clinical Pathology and Diagnostic Reagents :

The research activities continued on (i) Final Identification of E coli from urine by sera-type (preliminary) of 'O' antigen determination (ii) Anti-biotic Sensitivity Studies on Organisms Isolated from cases of Small-pox (iii) Studies on the Antigenic Structure of typhoid para-typhoid group under partial anaerobiosis for its possible application in the preparation of improved agglutinable suspensions (iv) Liver function tests to correlate with liver biopsy studies (in collaboration with Bio-chemistry Section) (v) Studies of the alimentary canal of the different ratfleas with the reference to the growth-promoting factors to p.pestis and other bacteria (in collaboration with Entomology Department and Director's Laboratory) (iv) Anti-genic studies on Cholera Vaccine and (vii) the Survey of the State of Venereal Infection.

Department of Entomology :

One student was trained in the specialised training. Six students were trained for M.Sc. and Ph. D. degree by research. Lectures were taken for M.Sc. by papers in Zoology. Two thesis for M.Sc. degree were accepted for students of this department by Bombay University. Research studies on D.muris was completed. The life history, morphology and the breeding of this mite on laboratory mice was achieved.

During the year under report, 15 dead rats, 73,023 live rats from the City and 5,990 live rats from the Bombay Port Trust area were examined for plague. No plague infection was detected.

Studies were started on the morphological structure of the salivary glands of different non-poisonous snakes in comparison with the parotid glands of the poisonous snakes. The total amount of venom produced during the year 1959 is as follows :—

Categories	Produced (in grams)	Supplied (in grams)
1. Cobra	62·9467	31·4965
2. Russell's Viper	19·9287	34·1643
3. Krait	13·2887	10·2217
4. Echis	2·8196	10·4170
TOTAL .	98·9837	86·2995

Department of Pharmacology :

The training programme continued to be very popular. Training was given in chemical, bio-chemical, micro-biological and pharmacological methods

of drug and analysis. Studies on the pharmacological actions of cholera endotoxin were continued.

As regards the studies on indigenous drugs, a systematic chemical and pharmacological study of the roots of withania somnifera was carried out. The juice of the leaves of coleus aromaticus, benth and the volatile principles of the same were also tested in vitro for vibriocidal and in vivo in infant rabbits suffering from experimental cholera. Chemical and pharmacological investigations on the seeds of thevetia nerifolia, juss were carried out.

3,980 samples were examined. These included a variety of drugs both pharmacopoeial and non-pharmacopoeial preparations like vitamins, hormone, galenicals, chemotherapeutic agents, antibiotics, complex preparations, insecticides. Occasionally drugs, belonging to the Ayurvedic, Unani and other systems of medicine, were received for analysis.

Department of Vaccine:

Two trainees under the short term training scheme were also trained in the preparation of vaccines. This department also participated in Technicians' Trainnig Course.

The research studies on Liquid Medium for T.A.B. Vaccine and production of Cholera vaccine by submerged culture method continued during the year 1959.

2,54,760 ml. of plague vaccine, 10,424,675 ml. of cholera vaccine and 301,977 ml. of T.A.B. vaccine were issued while 1,17,31,710 ml. of cholera vaccine and 3,04,738 ml. of T.A.B. vaccine were produced. The total quantity of vaccines issued during the year 1959 was 10,981,412 ml. The demand for plague vaccine was mostly from Madras and West Bengal. Those for Cholera vaccine were from the States of Bombay, Bihar, Madhya Pradesh, Rajasthan and Mysore and those for T.A.B. vaccine were mostly from Bombay State.

Department of Virus Diseases:

During the year under report, research studies on (i) Investigation on immunogenicity of viral vaccines with a view to standardization of testing procedures (ii) adoptation of rabies street virus to chick embryo and study of changes in pathogenicity (iii) the mechanism of sensitization in tuberculin sensitivity, study of Kyasanur Forest Disease, Virus strains and preparation of suitable vaccine and (iv) Quantitative testing of sera for neutralizing anti-bodies against 3 types of polio virus, were carried out.

Anti-rabic vacine: 36,13,057 ml. of vaccine were supplied as compared to 33,94,232 ml. in 1958.

Yellow fever: 6,682 persons were inoculated. The number of potency tests was 21. The doses of vaccine supplied to different places were 7,175.

Bio-chemistry Section:

During the year under review, the Bio-chemical Section continued its activities of examination of clinical materials from hospital and private clinics. Although work from private practitioners and clinics was on decrease.

The Government Hospitals were sending a large number of samples with a variety of estimations. The total number of analysis carried out was 8,709 as against 8,815 in the previous year.

Blood Bank Section :

The research activities continued on (i) The preparation of Rh Anti-D Serum (ii) Rh grouping of blood donors (iii) Preservation of tissues from cadavers (iv) Preparation of Anti A and Anti B Serum (iv) Preparation of Plasma Fractions from Placentas and (vi) Preservation of RBCS for long intervals at subzero temperature.

4,282 blood donors were bled for preparation of dried plasma and 635·750 litres of dried plasma were prepared. 76·250 litres of plasma were distributed free and 542·250 litres of plasma were sold making a total of 618·500 litres.

2,340 Kahn tests were performed of which 20·0 per cent were found to be positive. 350 samples were tested for Rh test of which 5·5 per cent was Rh negative. 38,340 ampoules of Anti-venine were dried.

61,700 ml. of blood was supplied to the clinical pathology department for preparation of Anti A and Anti B grouping sera.

Department of Nutrition :

The study on the Nutritional Evaluation of Foodstuffs commonly consumed in Bombay State continued during the year under report by the Indian Council of Medical Research, New Delhi.

Studies on the nutritive value of some leafy vegetables and their supplementary effects; some of the remaining chemical analyses of the two leafy vegetables *viz.*, ambadi (hibiscus cannabinus) and methi (trigonella focenumgraecum) mentioned in the last report were completed.

(ix) The Pasteur Institute of Southern India, Coonoor.

The Pasteur Institute of Southern India, Coonoor expanded its activities considerably during the year under report. It is internationally recognised for its research work on rabies. It is the main laboratory for work on influenza and other respiratory viruses in India. It is now serving as an important centre for research on intestinal viruses, vaccinia smallpox. Studies are also in progress on cholera and syphilis. It is co-operating with the Central and State Governments in various public health activities. The Institute is actively collaborating with international organisations like the World Health Organization and research organizations in India like the Indian Council of Medical Research in several of their research programmes. It serves as a training centre in rabies, other virus diseases and general bacteriology for workers sponsored by the WHO, Central and State Governments and Institutions in the country. The Institute has been recognised by Universities for training candidates for post-graduate degrees in bacteriology and virology.

The enormous number of patients, who were treated with vaccine prepared at this Institute and the numerous papers of scientific interest which were published during the past fifty-three years, indicate the important part which the Institute has played in medical and health work in India.

The anti-rabies vaccine employed for the patients was a 5 per cent suspension of infected sheep brain (Paris strain of rabies fixed virus) in normal saline prepared by Semple's method. A total of 38,19,718 ml. was manufactured during the year under report.

During the year under review, 980 patients had a complete course of anti-rabies treatment at the Institute (968 Asiatics and 12 Europeans). Incomplete course of treatment was also given to 184 patients (184 Asiatics) of whom 52 were absolved from further treatment after the possibility of rabies in the bitting animals had been excluded. The remainder absconded.

No case of post-treatment complication was reported during the year under review.

Anti-rabies treatment was also made available for the prophylactic treatment of animals. While it is advocated that dogs should be protected before they are exposed to infection, it is found in practice that treatment is comparatively seldom given until the animal is at risk. 6,38,218 ml. of phenolized 5 per cent sheep brain vaccine were issued for the treatment of animals, chiefly to Veterinary Officers of the Madras and other neighbouring States. The number of animals treated during the year under report was 4,492 of whom 2,614 were dogs.

The Blood Bank work at the Institute continued and 18,500 ml. of plasma was prepared.

The Value of 5 per cent Sample Vaccine in Human Treatment—Comparative Mortality among the Treated and Untreated:

The enquiry to determine (i) whether the 5 per cent Semple vaccine manufactured by the Institute has any protective value under circumstances in which adequate untreated control groups have been observed and (ii) whether there is any variation in the mortality rate as a result of treatment with 5 per cent Semple vaccine instead of the 1 per cent vaccine used during the years 1920-1924, was continued during the year under report.

It was observed that 7·91 per cent of persons bitten by proved infective animals develop the disease inspite of having a complete course of treatment. If the number dying within 15 days after the completion of treatment, who really cannot be classified as teratment failures, are excluded, the mortality rate would only 3·35 per cent. The death rate among a similar group of persons who refused treatment is 49·17 per cent. If the persons, who died during treatment, are also classified among the untreated, the mortality rate among the untreated would be 54·81 per cent. It is interesting to note that the mortality rate among the incompletely treated is 13·16 per cent.

If, on the other hand, we take into consideration all persons bitten by infective, proved and presumably rabid animals, the mortality rate in the treated group is found to be 0·31 per cent. If 18 deaths not considered as treatment failures are excluded the mortality rate in this group would be only 0·12 per cent. This figure is much lower than the mortality rate of 2·9 per cent reported by Cornwall for a similar group in his study. This would indicate that the results of treatment with 5 per cent Semple vaccine are superior to those obtained with the 1 per cent Semple vaccine used by him during the years 1912-1924.

Post-Infection Anti-rabies Treatment in Animals :

In view of the general belief that post-infection treatment of dogs, cattle and other animals is of no value it was considered desirable to investigate the problem. A careful study to determine the efficacy of post-infection treatment of animals was in progress since 1955. The fate of 3,390 animals, including 1,463 dogs and 1,765 heads of cattle, bitten by proved, certified or presumably rabid animals was followed. Particulars regarding the nature of the bites as well as the conditions of the animals six months after the completion of treatment were ascertained in each case.

Influenza :

The collection of epidemiological data from hospitals in the Nilgiris District was continued. During July, however, there was a rise in the number of cases reported in Wellington and Coonoor. At this time virus was also isolated in these areas.

The epidemiology of the disease in the Nilgiris District during the year under report based on virus isolations and serological studies, is interesting. In 1959, cases were observed for the first time at Coonoor in a local orphanage. All the inmates were inoculated with monovalent and bivalent Asian influenza vaccines. This out-break is perhaps one of the earliest out-breaks due to Type B virus in 1959.

The fact that the inmates of the orphanage have so far completely escaped from A2 virus infection although it is widely prevalent in the area is highly suggestive that the monovalent and bivalent Coonoor vaccines administered had good protective value.

Thus the epidemiological studies in the Nilgiris District indicated that while Asian strains were still current, Type B virus seemed to be responsible for most of the cases till the end of April. During the months May to July the out-breaks were mainly due to the Asian virus with occasional infections with Type B virus.

On 28th August, 1959 a report appeared in the press that a virulent form of influenza-like illness presumed to be an epidemic of influenzal encephalitis was raging in the village of Mettupalaym, about three miles from Villupuram in the Madras State. The fever was attended with violent fits and the 'patients run amuck in a State of unconsciousness'. The disease affected children in the beginning and later a few adults. The duration of illness was from 48 to 72 hours. Immediately on receipt of the news a team from the Institute was rushed to the village, about 225 miles from Coonoor, to investigate the disease.

Studies on the production and testing of Influenza Virus Vaccine continued during the year under review.

With a view to assess the antigenic value of influenza vaccine prepared at the Institute some trials were undertaken among human volunteers. These included studies with different batches and types of vaccine. The potency of methanol precipitated vaccine prepared with the PAR strain was tested in rabbits.

Intestinal Viruses :

Studies on the enteric group of viruses continued during the year under report. Specimens from suspected cases occurring either sporadically or in an epidemic form were collected. Virus isolation was attempted

from throat swab, faeces and cerebrospinal fluid by inoculation into cultures of monkey renal, human amnion, HeLa and intestinal epithelial cells.

Cholera :

Last year it was reported that it was possible to produce an enteric infection in guinea-pigs by feeding them with a strain of V. cholera freshly isolated from an epidemic without (i) rendering the vibrios streptomycin resistant (ii) alkalinization of the gastric contents and (iii) inhibition of the intestinal flora with streptomycin. In view of the above findings it was considered interesting to study the behaviour in guinea-pigs of NAG vibrios isolated during an epidemic of cholera.

Syphilis :

The nichol's strain of treponema pallidum was maintained by serial passage in adult male rabbits and by intradermal passage in female rabbits.

Examination of Sera by 'Battery' of Tests :

All specimens of sera received at the Institute were subjected in the first instance to a battery of tests including complement fixation tests with the crude Wassermann antigen and the purified Cardiolipin complement fixing antigen of Pangborn and the standard Kahn and VDRL flocculating antigens. Sera giving discrepant results with different antigens were tested a second time. Details of clinical history and treatment and repetition of specimens were requested from the Medical Officer sending the sera. The repeat specimens of sera were examined again by the same tests and in addition, the reagins titrated. The object of this study, which had been continued as a long term programme, is to compare the sensitivity and specificity of the complement fixation and flocculation tests carried out with different antigens and methods.

Venoms :

Studies were undertaken to determine whether chelating agents, detoxifying agents and iodine had any action against poisoning by snake venoms. The value of disodium ethylenedia-minetetraacetic acid (EDTA), polyvinylpyrrolidone and collosol iodine in cobra and Russell's viper venom poisoning had been investigated.

(x) BCG Vaccine Laboratory, Guindy, Madras.

The BCG Vaccine Laboratory, Guindy, Madras was established in 1958 for the production of tuberculin and BCG vaccine required for the BCG campaign. 26,30,378 c.c. of BCG vaccine and 43,64,193 c.c. of tuberculin were manufactured in this laboratory. 25,58,708 c.c. of BCG vaccine and 41,86,215 c.c. of tuberculin were supplied to Centres in India and to foreign countries. Out of which 39,02,515 c.c. of tuberculin and 18,01,228 c.c. of BCG vaccine were supplied to indentors in India and 2,83,700 c.c. tuberculin and 7,57,480 c.c. of BCG vaccine were supplied to foreign countries *viz.*, Afghanistan, Ceylon, Burma, Pakistan and Malaya.

A.P.P.D. dilution made from a fresh batch *viz.*, R.T.-23 of strength I.T.U. per dose, with Tween-80 added as a stabilizing agent was issued.

For the manufacture of dry freeze vaccine, a plant was installed at the laboratory and the required hard glan ampoules were also received from Japan. Experiments on the preparation of freeze dried BCG vaccine, using Lactose and Sodium Glutamate as the adjuvant, were in progress during 1959. Studies on the "viable unit counts" and "moisture content" of the dried vaccine were carried out during the year under report.

(xi) Indian Cancer Research Centre, Bombay.

The problem of Cancer is of such vast proportion that it requires all round approach to tackle the various problems connected with this disease. With a view to expanding facilities for post-graduate teaching and research in Cancer and allied subjects the Indian Cancer Research Centre, Bombay was established in December, 1952. The Centre is being managed by a governing body consisting of representatives of the Central Government and the Sir Dorabji Tata Trust. During the year 1959, grants amounting to Rs. 4,07,250 were given to the Centre.

Bearing in mind the available facilities, the following sections were working out the Cancer problems of Pathology Experimental Biology, Biophysics, Bio-chemistry, Enzym-Chemistry and Human Variation, Pathology of Leprosy and its mode of transmission in man, Family Planning Research and Biology and Medical Division of Atomic Energy establishment were also pioneering research work during the year under report.

Applied Biology :

The main programme of cancer work during the year under review may be defined as "Biological studies" on :—

(i) Mechanism of Carcinogenesis ; and

(ii) The fundamental problems in cell metabolism.

Besides two-fold programme of "invio" and "invitro" cancer work, the department was engaged in extensive programme of work on :—

(iii) Biological studies of Human Leprosy.

The problems selected for investigation in the mechanism of carsinogeneiss studies continued to be :—

(a) Cancer of the Breast.

(b) Cancer of the Skin.

In Cancer of the breast, the object is to study biological processes of spontaneous and chemical carcinogenesis, which is the cancer of the skin, is an attempt to evaluate the significance of chemical constitution of extinusic stimulus that induces the disease. An important part of skin carcinogeneiss studies, that continues to be in progress, is the testing of substances in daily use, indicating relationship with common cancers in the clinic, *e.g.*, testing of tobacco leaf extract in relation to oral cancer, testing of chinar tar with relation to kangri cancer etc.

Experimental Embryology :

Microbiology

It is now possible to study many biological phenomena cell growth and differentiation, tissue metabolisms at subcellular levels of molecular inter action. A deeper awareness of normal processes has stimulated a

greater curiosity above the divergence in abnormal states and the laboratory of the Centre was engaged in the study of the disease with electron microscope. Besides electron microscopy, a number of optical histological and histochemical methods were used in the laboratory to give the necessary additional information and interpret the electron microscopic finding correctly. The problems investigated during 1959 were as follows:—

(1) Studies of skin cancer.

(2) Studies on breast cancer in mice.

(3) Study of fixation.

(4) Study of the induction of submucous filrosis of the palate.

(5) Electron microscopy of biri and cigarette smoke.

(6) Ultra-structural studies of leprosy lesions.

Bio-physis :

During the year 1959, the work on the following continued :—

(A) Radiation Studies

(i) Application of Monolayer Technique;

The prominently observed effects are (a) partial break down of the molecule into smaller fragments and (b) reduction of the effective charge on the molecule.

(ii) Irradiation studies on Amino-acids.

(B) Smoking *vis-a-vis* oral cancer.

(C) Studies of poly-chromatic fluorescence of acridina orange.

(i) Differentiation of DNA and RNA in tissue by AO staining.

(ii) Spectro-photometric studies on compecaces of DNA and RNA with acridina orange.

Enzyme Chemistry :

During the year under report the investigation of "Meenampalayam" tobacco with a view to study its carcinogenicity was brought to a close, that on the metabolism of thiostero of carcinogenic hydrocarbons was developed and studies on experimental anti-fertility and certain bio-chemical and clinical aspects of Cancer were initiated.

Bio-chemistry :

The following investigational lines were in progress in this department:—

(1) Metabolism of folic acid (aided by a grant from the International Division of Lady Tata Memorial Trust).

(2) Metabolism of Mitochondria from normal and neoplastic tissues.

(3) Bio-chemical studies on mechanism underlying the toxic action of cobra venom (Scheme under the Council of Scientific and Industrial Research).

(4) Metabolic studies of Human Leprosy Organism (Scheme under the Indian Council of Medical Research).

Human Variation :

In view of high rates of consanguineous marriages found in large sections of the Indian population, a study was undertaken in the Parsi community of Bombay to investigate effect of these marriages. Studies of hereditary haemotylic anemia have brought to light rare syndromes of thalasseminagene in combination with various haemoglobin variants. With the development of new techniques, the studies of sex endocrine disorders had brought to light a number of interesting observations on the pathogenesis of abnormal growth of hair in women of active reproductive age and of the etiological factors involved in somatic and sexual under-development in Indian subjects.

The Blood Group Reference Centre has reached a stage of maturity and has been suffering reagents in the country, which were imported earlier. It was started under the auspices of the Indian Council of Medical Research, New Delhi and has completed three years in 1959.

Cancer Epidemiology :

Cancer of the mouth and pharynx constitute an important clinical problem in many parts of India. It appeared worthwhile to undertake a comprehensive field survey of smoking and chewing habits in different regions of the country. The survey, which was started in 1952, was completed in 1959 and had covered 17 districts in Western India *i.e.*, 13 districts of Maharashtra State and 4 of Mysore State.

Contraeceptive Testing :

On recommendations of the Family Planning Programme and Research Committee of the Government of India, the Contraceptive Testing Unit (C.T.U.) was set up at the Indian Cancer Research Centre in 1954 as the Centre would provide all the necessary facilities for the work of such a unit. The work carried out during the year under report can conveniently be summarised as under :—

1. Development of Local Oral Contraceptives.
2. Testing of Contraceptives.
3. Research on Physiology of Reproduction.

Neurology Unit :

This unit is financed by the Indian Council of Medical Research and located at the laboratories of Tata Memorial Hospital, Bombay. During the year under review, investigation on (a) Pathology of Kyasanur Forest Disease (K.F.D.) (b) Encephalitis (c) Metabolic Brain disorders were carried out and studies on (i) Lathyrisum and (ii) Pyridoxuine deficiency were undertaken.

Leprosy :

The various researches on leprosy carried out at these laboratories during the year under report are :—

(a) Therapeutic trials for leprosy were undertaken. Two drugs (i) Rudanti, an indigenous product which was used for tuberculosis

and other (2) Ciba S.U. 1906, manufactured by Ciba Pharmaceuticals were under clinical trials. Studies on the effect of Rumalaya (an indigenous preparation) on bone and joint pain was completed. Nardyl, another indigenous product was tried for nerve pain in leprosy but was found to be ineffective.

(b) Observations on the response to chemically inert particulate suspension injected intradermally in leprosy patients.

(c) Study of the lepromium reaction.

(d) Study of maculas in contact of leprosy patients.

(xii) The King Institute of Preventive Medicine, Guindy, Madras.

As usual, vaccine lymph, cholera TAB vaccine and plague vaccine were manufactured and supplied to the States by the King Institute of Preventive Medicine, Guindy. The Biological Control Department of the Institute analysed a total number of 3,302 specimens during the year under report.

The Department of Water Analysis and the Department of Government Analysts were separated from this Institute from 16th October, 1959.

New trials for improvement of yield and purification had given favourable results. Purification of crude lymph was possible by exposure to 10 per cent either at room temperature for 5 hours. This institute was selected by the UNICEF as one of the centres for the manufacture of freeze dried smallpox vaccine in India. Production of freeze dried vaccine was on experimental basis during 1959.

The Drugs Section under the Department of Biological Control, continued the analysis of biological products manufactured in this Institute as well as those sent by different hospitals in the city and mufussial and also samples received from Drug Inspectors under the provision of Drugs Act and samples from private firms etc. The investigation into the value of the male frog test in the diagnosis of early pregnancy and other conditions continued. The work on relative virulence of inaba and ogawa strains of V. Cholera was in progress during the year under report.

In the Sterile Solutions Section, the manufacture of quinine dihydrochloride ampoules had been resumed. Special solutions like Ringer Lactate, Darrows Solution, Merthiolate Solution etc., had also been manufactured and supplied.

The Department of Antitoxin augmented the manufacture of anti-tetanus serum and anti-gasgangrene serum during the year under report. The number of samples investigated for post-operating tetanus infection was the highest on record. Two tetanus toxoid for human use were manufactured for first time in the department and were subjected to final antigenicity tests as prescribed by Drugs Rules. Study on the toxicity of locally occuring variety of scorpion was undertaken as a first step to ascertain the possibility of manufacture of anti-scorpion sera which was not manufactured anywhere in India. Diphtheria assay was added on to the list of routine assys under this year.

The research work done in the Director's Laboratory during the year under review included:—

(1) Lizard Filariasis: 540 garden lizards (Calotes Versicolor) were examined and 25 were found to harbour filarial worms (Conispiculam guindiansis), the infection rate being 4·6 per cent as compared with 4·5 per cent during the years 1957 and 1958. From the infected lizards 62 male and 78 female worms were collected.

(2) Laboratory studies of Rhinosporidum—Attempts at culture:—Attempts to grow Rhinosporidium secberi on the routine media for fungi and bacteria from six cases were unsuccessful.

(xiii) The Regional Research Laboratory, Jammu and Kashmir, Jammu.

The Research Section of the Drugs Research Laboratory, Jammu was taken over by the Council of Scientific and Industrial Research and renamed as Regional Research Laboratory, Jammu and Kashmir.

Botanical Survey of medicinal and aromatic plants were made of some areas of Jammu and Kashmir, Kangra and Kulu (Punjab) and Mandi (Himachal Pradesh). About 400 species, belonging to 100 families of angiosperms, were collected. Special attention was paid to the distribution of *DIOSCOREA DELTOIDEA* which according to occular estimates may be collected up to 100 tons annually against an estimated demand of 2,000 tons a year. The diosgenin content of the tubers varied from 3·0 to 8·0 per cent. A most important observation was the discovery of very high yielding strain (8 per cent diosgenin) in the Bhadrawah hills.

Other potentially important economic plants *viz.*, Angelica glanca Edgw., *A.archangelica* Linn., *Cissampelos pariera* Linn., *Prangos papularia* Linde, *Nepeta catarin* Linn., *Inula roylenana* D.C., *Datura stramonium* Lind., *Nepeta catarin* Linn., *Inula roylenana* DC., *Datura stramonium* Linn., Fagopyrum species were also collected for semi large scale production of essential oils and active principles. Many other medicinal and aromatic plants were also collected for further chemical and biological investigations during the year under report.

For the cultivation of medicinal and aromatic plants, seeds of 42 species of exotic plants were procured from U.S.S.R. and U.S.A. and were introduced successfully. The most promising among these are being cultivated for seed production and distribution. Cultivation of following plants were studied in details during the year under report:—

(a) *Ammi Visnaga* Linn. (Introduced from Egypt). The seeds yield khelin, a coumarin, which has recently been introduced into modern medicine for the treatment of asthama and conornary heart disease.

(b) *Chenopodium Ambrosiodes* Linn. Var. *anthelminticum* A. Grey—This is an exotic plant from U.S.A. The seeds yield 1·2 per cent of oil which contains 70 per cent of ascaridole.

(c) *Mentha Arvensis* Linn., Subsp. *Haplocalyx Briq* Var. *Piperascens* Holmas (Japanese Mint.)—This most important plant was introduced from Japan as a source of menthol.

(d) *Anethum Graveolens* Linn (Dill). The fruit of this exotic European plant yields the British Pharmacopoeal Dill Oil containing 50-55 per cent Carvone.

(e) *Rauvolfia Serpentina Benth*—Experiment cultivation of R. Serpentina in nurseries attached to this Laboratory showed that an average yield of 2,000 lbs. of dried root per acre with a total alkaloid content of 1·7 per cent can easily be obtained from a 3 year old plantation.

Chemical and Biological Investigation of Indian Medicinal Plants :

In order to find an alternative starting material for the preparation of cortisone and other steriod hormones a systematic study of six solanum species was initiated. It was observed during the year under report that the fruits of *S. Xanthocarpum* schrad and Whedl. and *S. Indicum* Linn. contained 1·1 and 1·8 per cent alkaloids (Solasodine) and could form a good starting material. An economic process for the preparation of khellin from the locally raised fruit of *Ammi-Visnaga* was worked out. The yield of the product obtained was nearly 92 per cent of the theoretical and the product was obtained in a sufficiently pure form for all pharmaceutical purposes.

Essential Oil Bearing Plants of the N.W. Himalayas :

The leaves and flowering tops yielded 0·4 per cent of dark brown oil with characteristic smell. Palmitic acid, terpinene, menthol, a mixture of carophyllenes, aromadendrene, Se-guaiazuline and some unidentified hydrocarbons are some of the constituents.

Ferula Jaeschkeana Vahl.—The roots yield 0·1 per cent of greenish blue oil with pleasant odour.

Pure ascaridole is being extensively employed in the expulsion of round worms in place of chenopodium. A process was developed for its isolation from the *Chenopodium ambrosiodes* van. *anthelminticum* oil. The oil is dissolved in light petroleum ether and chilled to minus 35°C. Pure ascaridole crystallises out and is separated. The yield is nearly 70 per cent of the quantity present in the oil.

Quite a large number of plants were tested for their insecticidal or insect repellent properties; out of these it was found that *Tephrosia toxicasia Pers. Artemisia Vulgaris* Linn; *Angelica archangelica* Linn. possessed marked insecticidal activity.

Pharmacological and Microbiological Investigations :

The active principle *viz.*, alkaloid burmanine and total alkaloids isolated from the tubers of C poltata produced a fall of blood pressure in doses above 5 mgm/kg given intravenously in anaesthetised dogs. Similarly the total alkaloid isolated from the root bark of *Lochnera Rosea* Reichb (Rattanjot) showed significant and sustained hypotensive action which was further enhanced in experimental hypertension. The drug also produced relaxation of plain muscles and sadative action in central nervous system. Anti-bacterial studies have revealed that the total alkaloids inhibit the growth of micrococcus pygenes var aureus. V. cholera and M. tuberculosis.

Further pharmacological and microbiological studies on *Inula royleana DC, Vallaris heynei* Sprong, *Pristimora Indica* and *Punia granatum* were in progress during the year under report.

Technical Aid :

The Regional Research Laboratory, supplied genuine botanical samples to some research institutes and workers engaged in phyto-chemical research. The Laboratory also supplied genuine seeds, rooted suckers and cuttings of

medicinal plants to various States, Agricultural Departments and other interested organisations engaged on cultivation of drugs. More than 600 enquiries regarding medicinal plants were also attended to during the year under review.

(xiv) Malaria Institute of India, Delhi.

The Malaria Institute of India, one of the oldest Centres in the world for teaching and research in Malaria and other allied subjects, was founded in 1909 as the Central Malaria Bureau, where a number of research programmes and surveys were undertaken and a small reference library and museum were started. The Bureau was expanded to form the Malaria Survey of India in 1927. The Organisation was designated as Malaria Institute of India in 1938.

From its inception, the Organisation was financed by the Indian Research Fund Association (now Indian Council of Medical Research). The Government of India took over the Public Health Section in 1940, the research section in 1946 and the routine activities of the Insecticide and Mosquito Repellant Enquiry in 1958. A filaria wing was created in 1952.

Located at different times at Sahranpur, Kasauli and Karnal, the Institute shifted to its present site at 22, Alipore Road, Delhi-6 in 1958. Several new buildings and structures were constructed since then to keep pace with the expanding activities. The Southern India Branch at Coonoor came into existence in 1942. A Filariasis Training and Field Station was started in 1955 at Ernakulam.

Research Activities :

The research activities relate to different aspects of both malarial and filarial and were carried out at Delhi and the Branches of the Institute at Coonoor (Madras State) and Ernakulam (Kerala State). The research activities had to be curtailed to a considerable extent during the year under report due to the heavy training commitments under the National Malaria Eradication Programme. Besides a number of technical posts remained vacant as a result of absorption of many of the Institute staff by the two national programmes.

I. *Epidemiology :*

(i) The work was taken up with *Culex fatigans* which had become highly resistant to DDT. Part of the investigation was completed during the year under review. There was no alteration in the vectorial capacity of DDT resistant *C. fatigans* for *P. relictum.*

(ii) The infectivity of persons with varying levels of microfilarial densities was studied. It was observed that mosquitoes could pick up the infection when fed on carriers even at a time when no circulating microfilariae are patent in the peripheral blood.

(iii) The susceptibility of monkeys in human filarial infection (*W. bacrofti*) is being studied.

(iv) A strain of *W. pahangi* in cats has been established. Studies on the periodicity of the microfilariae are in progress.

(v) Studies on age determination of natural population of *Anopheles subpictus* in rural areas around Delhi were started in September, 1959. Studies on age composition of a natural population of *Culex fatigans* were started in July, 1959.

(vi) In Kerala State, mosquitoes of all species collected were dissected. Besides, the usual vectors, *C. sitiens* and *A. subpictus* were found positive for filarial infection and out of 815 *A. subpictus* dissected, two were found positive.

II. *Chemotherapy: Anti-malarials—Synthesis, screening and metabolism:*

(i) Synthesis of sulphaquinazolone derivatives as potential anti-malarials : The work on the synthesis of sulphaquinazolones (reported in 1958) was extended to other derivatives having variation of different groups in the 4(3)—quinazolone nucleus. Attempted synthesis of substituted thinrea and urea derivatives of 4(3) sulphaquinazolones.

(ii) *Laboratory and field trials:* 11,182 cases were examined and advice given at the clinic attached to the Filariasis Training Centre, Erankulam (Kerala State) at temporary field investigations at Ponnani and Thuravur.

Treatment of acute clinical attacks: Sulphone tablets given to filarial patients (dosage of 50 to 200 mgm a day for 6 to 7 days) was found to be effective in markedly reducing the number of filarial fever attacks and in prolonging the interval between each attack.

III. *Pathology and Immunology:*

(i) Studies on albinomic to determine whether immunity to malaria could be inherited, commenced in 1956, were continued. The results of the studies upto fourth generation have not given any significant results.

(ii) Systematic studies on the adhesion phenomenon in human filariasis were commenced during the year under review.

IV. *Vectors and Their Control:*

(i) *Bionomics of mosquitoes:* Studies on the gonotrophic cycle, developmental period and oviposition of mosquitoes were continued with *C. fatigans* and *A acgypit*. Studies were continued on the seasonal prevalence resting habits, time of entry and feeding time and blood feed preferences of *C. fatigans, M. annulifera* and *M. uniformia,* the vectors of filariasis in Ernakulam area of Kerala State.

(ii) Studies on seasonal prevalence and incidence of anophelines in villages of Uttar Pradesh/Delhi border, and studies on the incidence and prevalence of mosquito larvae in anopheline-type breeding waters in rural areas outside Delhi were continued.

(iii) *Resting habits of Culex fatigens:* Morning observations on the resting habits of *C. fatigans* near Gaziabad in Uttar Pradesh were concluded in October, 1959. Observations on incidence, seasonal prevalence, host preference and feeding time of culicines in villages near Delhi. In-door night collections started in 1956 to study the culcine fauna and their bionomics near Delhi were concluded in November, 1959. Buffalo was the preferred host followed by main, donkey and cow. A majority of culicines fed before midnight than after it.

(iv) Detailed studies on the bionomics of *mansonicides* spp. were in progress.

(v) Studies on the colour preference of the house fly for oviposition concluded during 1959.

(vi) A test kit for measuring susceptibility of sandflies was received from W.H.O. for trial and comments. The kit was found to give consistent results. Some comments for improvement in the performance of the kit were communicated to W.H.O. Work on the development of suitable technique for determining susceptibility of bed-bugs, cyclops and sandflies were carried out during the period under report.

(vii) *Susceptibility of arthropods to insecticides:* Susceptibility tests were carried out on different species of arthropods to collect the base line data and detect cases of resistance, if any. Studies on the comparative rate of metabolism of DDT in resistant and susceptible *C. fatigans* larvae showed that the rate of metabolism of DDT to DDE was higher in case of resistant strain than the susceptible one. No further metabolism of DDE could be detected in either strains of *C. fatigans*.

(viii) *Efficacy of special larvicidal oil against culcin mosquito breeding:* Field investigations were carried out with the special larvicidal oil against Culicine larvae at Port Cochin (Kerala State).

(ix) *Efficacay of phosdrin against Culcine breeding:* Trials were carried out with Phosdrin against Culcine larvae at Ponnani and Port Cochin in Kerala State.

(x) *Tropical storage studies with 50 per cent w.d.p. in gunny bags with an alkathene inner lining:* Studies during 1958 on tropical storage of 50 per cent DDT w.d.p. in gunny bags, revealed that after keeping the material in these bags for 12 months, it had deteriorated due to agglomeration of particles, on account of pressure and moisture. Hence the storage studies were started with a new type of gunny bag with an alkathene inner lining in them.

V. *Surveys:*

Mosquito survey of sea and air ports at Madras was conducted in May, 1959. A rapid survey to determine the DDT susceptibility status of *A. Culcifacies* in different districts of Bombay State was undertaken in October/November, 1959.

VI. *National Filaria Control Programme:*

Filariasis, an important mosquito-borne disease, has been known to be prevalent in India for centuries past. Little was done till recently for the control of this infection due to various reasons *e.g.* negligible mortality caused by the disease and non-availability of proper methods for its treatment or control. About 40 million people in India are considered to be residing in areas exposed to the risk of filariasis.

Forty-six filaria control units were allotted to various participating States up to the end of 1958-59. No new control unit was allotted during the year 1959-60 and subsequent years of the Second Five Year Plan period and the programme is to continue at the existing level. 45 units have been established so far. The West Bengal Government has surrendered the 46th

unit for the present which has since been proposed to be re-allotted to Mangalore to raise the same to a full unit and the remaining equipment and material has been re-allotted.

The control methods consist of (i) anti-mosquito measures using (a) imagocide against the mosquito vectors and (b) larvicide against aquatic stages of mosquito vector and (ii) mass therapy *i.e.* anti-parasitic measures aiming at administration of diethylcarbamazine to all persons in the areas covered by the units.

The progress made in the programme since the inception to the end of 31st December, 1959 is as shown below: —

Population covered by survey (in lakhs)	No. of persons treated with drug (in lakhs)	Houses sprayed (in lakhs)			
		1st round	2nd round	3rd round	Total
229·39	48·91	24·59	9·83	2·40	36·82

Anti-larval measures were in force in some of the urban areas in the participating States *viz.*, Patna (Bihar), Surat (Bombay), Mangalore (Mysore), Kumbakanam (Madras) and Trivandrum (Kerala), where the National Filaria Control Programme units are located. Due to the vast extent of the breeding places and the lack of proper drainage system in these places, the larvicides used have not been uniformly satisfactory in the varying types of breeding places prevalent. Much stress had been laid on the position of proper drainage schemes in filarious areas. The insecticides (Dieldrin) and larvicide (BHC 6·5 per cent gamma) did not yield satisfactory results. Pilot studies are being conducted with formulations having high gamma BHC as insecticide. Mosquito larvicidal oil was recommended for larval control operations.

The training course for Filaria Inspectors, which was started on 12-1-1959 ended on 7-2-1959 and 36 inspectors were trained. The number of Officers and Inspectors trained upto 31-10-1959 were 70 and 136 respectively.

VIII. Audio-visual equipment and training material:

(a) Film strips (black and white) on filariasis prepared by the Central Health Education Bureau in collaboration with U.S.T.C.M. were distributed to the filaria units in the States.

(b) A documentary (16 mm) on filariasis was completed by the Government of India, Ministry of Information and Broadcasting, which is expected to be distributed shortly.

(c) A series of film strips (colour) are under production by the U.S.T.C.M. Consultant Entomologist assigned to the programme.

(d) Set of audio-visual equipment obtained from U.S.T.C.M. are awaiting distribution to various States for which the Union Ministry of Health is taking action.

(e) A chart depicting the "life cycle of filariasis" is under production.

(f) Teaching material (slides, specimens and papers) were supplied to various workers and institutions interested in filariasis and its control.

No material aid was promised for the National Filaria Control Programme by the U.S.T.C.M. for the year 1959 except laboratory equipment and books worth about Rs. 47,619 for use of U.S.T.C.M. technicians assigned to the Malaria Institute of India in connection with National Filaria Control Programme.

(xv) Central Research Institute, Kasauli.

The Central Research Institute, Kasauli was engaged in the routine manufacture of different biological products for prophylaxis against typhoid, cholera, rabies, diphtheria, and snake bites. Besides the manufacture of these vaccines and sera, which were mainly supplied for the use of Army and Civil Authorities in India, a considerable amount of research work into the preventive aspect of different communicable diseases common to our country was undertaken. A large number of samples (of biological products such as penicillin, tetanus antitoxin, protein hydrolysates etc.) were tested at this Institute. Table No. 68 shows quantity of sera and vaccine manufactured and supplied by the Institute during 1959 and Table No. 69 shows the number of samples examined during the year under review.

The Field Unit carried out laboratory investigations and epidemiological studies such as cholera, typhoid, dysentery, influenza, smallpox etc. With the active cooperation of the World Health Organisation a National Salmonella and Escherichiae Centre was established to act as a reference laboratory for these group of organisms and to assist the different regional state laboratories in the typing and diagnosis of such organisms.

The laboratory for the manufacture of yellow fever vaccine was completed during the year under review and its manufacture will start soon at the Institute. The Institute has also been recognised for post-graduate training such as M.D. (Pathology and Bacteriology), Ph.D. (Bacteriology) and Ph. D. (Bio-chemistry) by different Universities of India during the year under report.

Research and other activities :

In the Antibiotic Section, *modified blood level duration test for Benzyl-Penicillin with aluminium-monsterate* was carried out on a total number of 79 sheep, and it was found that 55 (69 per cent) gave a sensitivity corresponding to more than 0·03 units Penicillin injected intramuscularly. An investigation was undertaken to find out if *erythrocytes in plumonary tuberculosis are sensitised in-vivo and differ antigenically from normal erythrosytes.*

In the Bio-Chemistry Section "Immuno-chemical studies with reference to vibrio polysacharides and proteins and the protection role of these factors in cholera immunity" were carried out. In collaboration with the Government Medical College, Patiala, Fluorosis studies in Bhatinda district of Punjab State was in progress. Amylases of V. cholera has also been studied in starch by Wohlgemath's Iodine Method, Viocosimetric method and estimation of reducing sugar.

In the Sera and Vaccine Section, studies were undertaken to reduce abnormal toxic reaction of TAB vaccination. It was observed that for malisation reduces the toxity without loss of potency.

Attempts were made to make a freez dried polycalent antivene (liquid). In preliminary tests 1 c.c. of this has been found to neutralise at least 0·6 mg of each of the four venoms *viz.*, from Cobra, Krait, Echis and Russel's Viper.

Indigenous and new snake bite remedies were put to test by scientific experiments. None of the claims could so far be supported. Cholera Enquiry further investigations were undertaken by the Indian Council of Medical Research, New Delhi to elucidate the pathogenesis of Cholera.

The National Salmonella and Escherichia Centre was established in 1958. As the information on the incidence of Salmonellosis apart from infection by S. typhi and S. partyphi A is very meagre in India, attempts were made to obtain strains for identification of different sero-types in the group prevelent in the country. These strains were isolated from stools of cases of gastro-enteritis. During 1959, the total number of cultures received and examined was 125 (Genus Salmonella).

In the Virus Section, experiments were carried out to determine the ratio of anti-rabic serum and anti-rabic vaccine on the basis of weight in the anti-rabic treatment which can protect guinea-pig and mice after street virus inoculation.

An egg adapted rabies virus strain has been developed at this Institute. Three dogs immunised with 10 per cent live virus suspension survived street virus challenge and showed a high level of neutralizing anti-body.

Twenty per cent anti-rabic vaccine made in distilled water (without carbolic acid) has been inactivated with ultra-violet radiation. Test in mice showed complete inactivation of virus. Potency of the vaccine is being tested. An apparatus for ultra-violet ray irradiation of rabies vaccine has been developed at the Institute during the year under review.

(xvi) The All India Institute of Hygiene and Public Health, Calcutta.

The activities of the All India Institute of Hygiene and Public Health, Calcutta, relating to the training of public health personnel of different categories, continued during the year under report. The aims of the Institute which were to provide instruction in preventive and social medicine and to conduct research in associated fields for the requirement of medical protection and positive health for large units of population, both urban and rural, continued to be fulfilled during the year under review. During the session no sera, vaccine etc., were manufactured but routine bacteriological examination of 538 samples of water received from different sources were examined. Virulence test for C.Diphtheria of 46 strains was done.

In connection with the general health survey of the Deshpara Village, under the Singur Rural Health and Training Centre, by the D.P.H., L.P.H. and D.M.C.W. students; 277 swab were examined for diphtheria organisms, schick test was done in 97 children, 535 individuals were tuberculin tested, 865 blood slides were examined and 768 persons were examined for parasite in their stool. Students of D.P.H., L.P.H., D.M.C.W., P.H.N., M.E.(P.H.) and teachers training in Preventive and Social Medicine participated in the improved family study programme and a number of seminars were held. More intensive training in tropical diseases was arranged at the School of Tropical Medicine, Calcutta.

The number of students admitted at the Institute in various courses during the academic year 1959-60 were as under:—

Courses	Indian students	Non-Indian students	Total
1. Diploma in Public Health (D.P.H.). . . .	64	3(Burmese—1 Iranian—2)	67
2. Licentiate in Public Health (L. P. H.) . . .	4	..	4
3. Master of Engineering (Public Health) M.E. (P.H.)	29	1 (from Phillipine)	30
4. Diploma in Maternity and Child Welfare (D.M.C.W.)	12	..	12
5. Diploma in Industrial Hygiene (D.I.H.) . . .	9	..	9
6. Diploma in Nutrition (D. N.)	1	..	1
7. Diploma in Dietitics (Dip-Diet).	1	..	1
8. Certificate in Public Health Nursing . . .	36	3(Egyptian—1 Iranian —1 Sudanes —1)	39
9. [illegible]	17	..	17
10. Certificate in Medical Statistics	4	..	4
11. Certificate Course in Preventive and Social Medicine.	5	..	5
12. Certificate Course in Laboratory Technique . .	20	..	20
13. Orientation Course in Epidemiology . . .	23	..	23
14. Orientation Training Course (Singur) . . .	90	4 (Burmese)	94
15. D.Sc. (P.H.)	..	1 (Egyptian)	1
16. Research student	..	1 (Chinese)	1
TOTAL .	325	13	338

In addition to above, short term special training programme was arranged for 10 W.H.O. and other fellows, who visited this Institute during the year under report from different foreign countries.

A proposal for the revision of the course, as was formulated by the Director of the Institute, keeping in view the needs of the country and the world trends in fields, was adopted by the University of Calcutta in October, 1959 and it came into effect in the year under report.

The Institute's Urban and Rural Community Controlled Practice Field at Chetla and Singur respectively continued to render assistance in the field training of students of this and other institutions research work and also medical services to the community.

Bio-chemistry and Nutrition :

839 gms. of metaxylo-hydroquinone were prepared from 2:6 dimethyl aniline and 1,823 capsules each containing 0·3 to 0·4 gms. of meta-xylohydroquinone were supplied for field trial in different family planning clinics

under the Institute. During routine toxicity tests, the drug in the above dose indicated non-toxicity. No abnormality was observed when 167 vaginal smears were examined to study the effect of this drug on progesterone metabolism as reflected in exforliative cytology in the vaginal smear.

Studies on Vitamin E deficiency and its relation with Vitamin A and protein metabolism were continued during the year under review.

Bio-chemical investigation revealed that in all cases of Bilot's sports, the liver function test was found to be definitely above normal and the serum protein especially the albumins greatly lowered.

During 1959, a preliminary survey was conducted at Singur about nutritional and non-nutritional factors in the etiology of kwashiorkar. It was revealed that apart from primary protein deficiency, other factors like gastro-intestinal upsets due to worm infection, faulty feeding habits, diarrhoea, ignorance and other environmental factors play very important part in the etiology of this disease.

Microbiology Section :

Cholera : Studies were carried out to work out the possibility of evolving a suitable method for typing strains of V. Cholera on the basis of their lytic pattern with the aid of different cholera bacteriophages. This may be helpful in the epidemiological study to locate the source of the disease, its source of infection and to plot its spread.

Small-pox : A study on the immunity status of new-born babies against smallpox was conducted by the haemoagglutination inhibition tests. This will provide information as to how far primary vaccination in infants within two week's age would be useful.

Gastro-enteritis : Organism isolated from cases of gastro-enteritis in the Rural Health Unit and Training Centre, Singur were studied and certain sero-types of salmonella isolated in the section were of interest since such types were never isolated before.

Influenza : So far the virus was not isolated from any cases resembling influenza. Some sera, however, showed the presence of anti-body against the Asian strain.

Sanitary Engineering :

During the year under review the unit carried out work on (1) Bio-filter (2) Batch and continuous digestion of distillery water (3) Pilot plant studies for distillery wastes treatment and (4) Mass culture experiment on algae to study the effect of carbon dioxide, temperature and light intensity on the efficiency of oxygen production. The field unit at Patna continued their survey work of the industries and set up a pilot plant at the Bhita Sugar Factory. The Lucknow Field Unit completed the industrial waste survey of the entire Uttar Pradesh region and has also drawn up a pilot plant scheme for recovery of potash from treated distillery waste.

Maternity and Child Welfare Section :

Research scheme on incidence of worm infestation, an Indian Council of Medical Research enquiry, continued as in the previous year with the cross sectional and longitudinal study. Another Indian Council of Medical

Research enquiry on field trials with protein rich food also continued during the year 1959 with three groups of children *viz.*, (1) Fed on Bengal gram powder (2) Skimmed milk and (3) Control on other research activities of the section, started during the year, were:—

(1) Diarrhoea in infancy and childhood.
(2) Analysis on the data of infant morbidity at Chetla.
(3) Morbidity of school children in Chetla area.
(4) Accident among children.
(5) Oral contraceptives trial at Singur.

Epidemiological Section :

Studies on cholera toxin : One of the problems of cholera control work in India is the weak anti-genic value of the anti-cholera vaccine which produces only anti-bacterial immunity. On the other hand, the pathogenivity of cholera has always been considered as due to toxin; most of the workers consider it to be an endotoxin obtained by growing the organism *aerobically*. The Professor of Epidemiology, however, in his earlier work obtained soluble toxin of the nature of an exotoxin by growing the organism anaerobically. If this toxin is mainly responsible for the total effect of cholera it should be included in the vaccine in the form of toxoid so as to yield maximum protective effect of anti-cholera vaccine.

Studies in the immunity of Smallpox :

This work was undertaken to evolve and standarise a technique to find out the level of immunity before and after vaccination and re-vaccination. Observation so far made suggested that the level of immunity does not increase with re-vaccination unless there is primary type reaction. It has been found that the lend of immunity gradually falls in persons who have shown negative reaction to re-vaccination and also in persons who suffered from smallpox.

Work of the Epidemiological and Virological Unit :

During 1959, an Epidemiological and Virological Unit was set up in the Institute. The following investigations were carried out by this unit:—

(1) With certain amount of success, data on cholera and smallpox were collected from different States in India;
(2) A new technique to measure the endemicity quantum of cholera was evolved;
(3) The work on endemicity of cholera in Calcutta reported last year was continued and extended to the Greater Calcutta area; and
(4) Investigation of an out-break of jaundice in Gomoh Railway Colony (Eastern Railway) was carried out by this Epidemiological Unit.

(xvii) Central Institute of Research in Indigenous Systems of Medicine, Jamnagar.

During the year 1959, the research was focussed primarily on the following disease heads :—

1. Grahani Roga (Chronic Bowel Troubles).
2. Udara Roga (Abdominal diseases) .

3. Amavata (Rheumatic conditions).
4. Krimiroga (Ascariasis).
5. Tamak Swasa (Asthma).
6. Further study on Phanduroga.

The first three are studied at hospital level and the latter two at the out-door level. The distribution of cases was as follows :—

1. Number of patients present in wards as on 1st January, 1959	34
2. Number of patients admitted from 1st January to 31st December, 1959	25
3. Total number of patients during the year 1959	286
4. Number of patients completely studied	217
5. Number of patients not completely studied	33
6. Number of patients discharged during the year 1959	250
7. Number of patients remained in wards as on 31st December, 1959	36

Of 217 patients studied in the in-door department, 159 were studied by Ayurvedic Team and 52 by the Siddha Team. The Modern Team studied all these and 6 more cases from the point of view of modern medicine.

The distribution of the cases studied by the Ayurvedic Team was as follows :—

Categories	Cases
1. Udara roga	15
2. Agnivikara	26
3. Pandu and allied diseases	45
4. Amavata	7
5. Krimi	8
6. Kash	6
7. Vatavyadhi	18
8. Others	34
TOTAL	159

So far as drug treatment was concerned, 12 cases of Jalodar were treated with Arogya Vardhini, Jalodarari, Punarnavasthak kwath, Purnarnava Mandur and Suddha Mandur. Of these 12 patients, 5 patients were cured while various degrees from slight to moderate improvement was noted in rest of the 7 cases.

One case of Yakrutalyudar was treated with Arogya Vardhini and one case of Yakryt-pleehavridhi treated with Suddha Mandur and Arogya Vardhini and the third case of Vodh Gudodar treated with Nirooha Vasthi. The results were inconclusive in the latter three cases.

There were 5 cases of Grahani, 5 of Pravahika, 5 of Amlapitta, 9 of Agnimandya and 2 of Atisara. 2 cases of Grahani were cured very well while the other 3 cases showed some improvement. 7 patients of Agnimandya cured with Suddha Mandur and Abhaya Pippali, while Satavari Swaras, Amruta Swaras, Avipattikar Churna and Sooth Sekhar were useful in 3 of the 5 cases of Amlapitta.

45 cases of Panduroga and allied diseases were treated on the same lines as in previous years with Punarnava Mandur, Suddha Mandur, Louha Bhasma, Suddha Kasisa etc. So far as Kamala was concerned, 4 of 6 patients showed marked improvement with Falatrikati kwath, Trivrachurna, and Arogya Vardhini.

Suddha Guggulu, Rasnasaptak kwath, Eranda tail and Nigundipatra kwath fomentation brought relief to 6 patients of Amavata. 8 patients of Krimiroga treated with Palas Beej Kwath and Rasa Kriya were free from the infestation. Bhargyadi kwath, Pushkarmool Churna, Somachurna, Rasamanikya, Manahsiladi Ghrit and Kanakasava brought relief to 4 of 6 patients suffering from swasa.

The Siddha Team studied 52 cases. There were 24 male and 28 female patients in this series. The diagnosis and treatment were along the lines suggested in the Siddha text.

The observations made by the Modern Team were as follows :—

During the year 1959, the research work on Grahaniorga, Uadara roga, Amavata, Ascariasis, Eosinophilia and Psoriasis continued as detailed below :—

(1) Grahani roga cases included a group of cases of different etiology according to modern medicine. However, Panchamrit Parpati as a drug and only butter milk as diet brought marked relief in majority of these cases;

(2) Udara roga or ascitis cases had good diuresis and frequency of stools resulting in complete disappearance of acitic fluid. Cirrhosis of liver, congestive cardiac failure and mesenteric tuberculosis cases were in this group ;

(3) Palash beej (Butea frondosa seeds) tried by both Siddha and Ayurvedic Teams was effective in 80 to 90 per cent of cases of roundworm infestation, according to the type of preparation—powder, decoction, dried decoction etc; and

(4) Psoriasis of skin—patients showed marked improvement with local application of Chandamarutham with butter as prescribed by Siddha Unit.

The Department of Pharmacognosy collected 118 crude drugs from Jamnagar and nearby Barda Hills. 1,716 plants along with 84 crude drugs were also collected from Junagadh area in Saurashtra. Among the plants collected were 300 from Jamnagar and 1,716 from the Barda Hills. They were all dried and poisoned. 252 plants were added to the herbarium of the Pharmacognosy Department after proper identification and labelling. The Pharmacognosy of palas seeds was studied. From the 25 sections cut, slides were prepared for microscopic study. The cultivation of important Ayurvedic plants was taken in hand and already 100 plants are growing in the garden.

As regards the museum of this Department, the drugs collected during various tours were identified, their Sanskrit and Hindi names searched out and the work upto pedaliaceæ family has been completed.

CHAPTER XIV

Indigenous Systems of Medicine and Homoeopathy

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CHAPTER XIV

INDIGENOUS SYSTEMS OF MEDICINE AND HOMOEOPATHY

A welfare state aims at to provide her people with food, shelter and health services. In India, due to shortage of doctors, health services were very much inadequate in remote rural areas, where 82 per cent of Indian population lives in 5 lakh villages. The development of Indigenous Systems of Medicine can provide a solution to the problem of medical relief, particularly to vast rural areas of our country. With the advent of independance, the Government of India started exploring possibilities for their development. During the First Five Year Plan period a sum of Rs. 37·5 lakhs was earmarked and in the Second Five Year Plan period, a provision of Rs. 100 lakhs has been made for the development of Indigenous Systems of Medicine *viz.*, Ayurveda, Unani, Homoeopathy and Nature Cure. A provision of Rs. 521·83 lakhs has been made in State plan for the development of Indigenous Systems of Medicine out of which a sum of Rs. 221·49 lakhs has been earmarked for the improvement of existing colleges and establishment of new colleges for Indigenous Systems of Medicine. During the year 1959, apart from a sum of Rs. 15·25 lakhs allocated to various State Governments to meet the expenditure in connection with the establishment and expansion of the institutions engaged in the teaching and research in Indigenous Systems of Medicine including Homoeopathy and an additional sum of Rs. 2,66,650 was sanctioned as grant in-aid to private institutions for research and development of Indigenous Systems of Medicine. The central assistance was given mainly to meet the recurring cost of maintenance of research beds in selected institutions for approved research schemes and for improving and up-grading of the existing teaching institutions as well as for the establishment of new teaching institutions in States. In this connection it may be mentioned that in 1956-57, an adviser in the Indigenous Systems of Medicine was appointed in the Ministry of Health. Three Advisory Committees on Ayurveda, Unani and Momoeopathy were appointed to advise the Government on research schemes and other matters connected with their development system continued to function during the year under review. Towards the end of 1959, however, the Advisory Committee on Ayurveda was replaced by a Central Council of Ayurvedic Research in pursuance of a recommendation of the Committee to assess and evaluate the present status of Ayurvedic System of Medicine. The Central Council of Ayurvedic Research met in December, 1959 consisting of six eminent Ayurvaids and two Scientists with Minister of Health as Chairman, the Secretary of the Ministry of Health as Vice-Chairman and the Adviser in Indigenous Systems of Medicine as Member Secretary and considered the over all position of Ayurveda in general and research in particular. The Council was of the view that :—

(1) Extensive research in Ayurveda, including research in the fundamental principles, should be undertaken throughout the country;

(2) Steps should be taken to ensure uniformity of training curricula and syllabi of studies, standards of general education and qualification for admission to Ayurvedic studies and for the award of the degrees or diplomas;

(3) Every research institute should have Scientists, Chemists, Botanists etc., on its staff and such units should also have their own library

herbaria, museums and hospitals with a minimum of at least 200 beds in each hospital;

(4) Every State should have its own pharmacy and proper facilities for identification of medicinal plants and drugs;

(5) Ways and means for conducting botanical surveys should be worked out by convening a conference of the Forest Department, Indian Council of Agricultural Research, Council of Scientific and Industrial Research and learned Vaidyas;

(6) The concrete recommendations of the Udupa Committee may form the basis for further action;

(7) For ensuring uniformity of Ayurvedic education throughout the country and since education is a State subject and the State Governments are directly concerned with it, there should be a co-ordinating statutory body more or less on the lines of the Indian Medical Council;

(8) A status more or less similar to that given to graduates of modern medicine should be given to graduates of Ayurveda and the latter should not be placed in an inferior position ;

(9) Education in Ayurveda will have to be correlated intimately with research;

(10) The Council should look into the question of text-books—by even publishing the books, if necessary, under its direct auspices;

(11) Drug standardisation, in collaboration with States, should be attempted;

(12) The Council should organise and run a central herb garden, where an attempt should be made to cultivate herbs grown in different parts of the country; and

(13) The Council should have ample hospital facilities because diagnosis of disease, relief from disease and research in disease should be carried out at one place.

They also considered the question of allocation of central assistance to Governmental and private institutions carrying on research in Ayurveda under the Central Government Scheme. After reviewing the facilities available at the existing institutions in the country on recommendation of the Pandit Committee, the Government of India established the Central Institute of Research in Indigenous Systems of Medicine, Jamnagar in 1953 in association with the Gulab Kunwarba Ayurvedic Society. During the last six years (1954-59) 989 cases were studied in the in-patient departments. The research studies carried out were mostly on Pandu Roga (Anaemia), Grahani Vikaras (Gastro-intenstinal Disorders), Udar Roga (Diseases of Abdomen), mainly Jalodhara (Ascites) and Pleehodara and Jakradudara (Spleenomegli and Hepatomegali) and Aamavata (Rehumatic condition). 5 diseases were selected for research study *viz.*, Grahini Vikar, Udar Roga and Amavata in hospital level and Krimi Roga (ascariasis) and Tamaka Sawasa (Asthama) in the out-door level. All physicians (Ayurvedic, Siddha and Modern) and the pathologists assembled together every week and discussed cases in details with a view to understand the principle of the three Systems of Medicine and their distinctive approaches to the

diagnosis treatment of the diseases under research study in the Institute. The identification of crude Ayurvedic drug plants and herbs and cultivation of medicinal herbs etc., were under the research programme of the Institute.

The Post-graduate Training in Ayurveda was established by the Government of India, in collaboration with the then Government of Saurashtra and the Gulab Kunwarba Ayurvedic Society, Jamnagar, in 1956. The purpose of the Institute is to create a body of the true exponent of Ayurveda, who are well versed in their systems of medicine and are at the same time able to understand and appreciate implications of modern scientific approach to the study and evaluation of the problems.

As usual, 25 students were selected on an all-India basis for admission at this Post-graduate Training Centre in Ayurveda. Every student was granted a stipend of Rs. 100 per month for two years during the course. So far 15 students qualified in 1958 and 19 in 1959. Most of the post-graduates qualified from this centre were engaged either as teachers or as research workers at various institutions in different States in the country.

The State-wise detailed information in respect of Ayurvedic System of Medicine during 1959 is briefly stated below:—

Andhra Pradesh: In order to encourage Ayurvedic System of Medicine and education in the State, one Ayurvedic College was functioning during the year under report. The work relating to the Registration of Ayurvedic patients was actually commenced from September, 1959 and 109 Ayurvedic Medical Practitioners were registered with the Board of Ayurveda Medicine constituted by the Government of Andhra Pradesh.

Assam: The Ayurvedic System of Medicine is very popular both in rural and urban areas in the State. There was one Assam Ayurvedic College at Jhalukbari. The College imparts Diploma Course in Ayurveda of 4 year duration. There was a proposal to up-grade it to six year degree course. Upto the end of 1959, 303 Ayurvedic Practitioners in the State were registered. The Unani System of Medicine was not very popular in the State during the year under review.

Bihar: During the year 1959, the admission capacity in the Government Ayurvedic College, Patna was raised from 50 to 60. The bed strength of this college was also raised from 10 to 44. A State Pharmacy of Ayurvedic and Unani Medicine was functioning. A Manager was appointed for this pharmacy during the year under review. There were three other Ayurvedic Colleges at Begusarai, Bhagalpur and Madimbani, affiliated by the State Faculty of Ayurvedic and Unani Medicine and aided by the Government.

In the Ayurvedic and Unani Research Unit the problems of Ambat and Parrivan Shul were taken up. 445 Vaidyas, 71 Hakims were registered during 1959.

Kerala: Five Ayurvedic Hospitals and 31 Ayurvedic Dispensaries were opened during the year 1959 in this State. On the recommendation of the Council of Indigenous Systems of Medicine, the Diploma, D.I.M.S. granted by the Board of Indigenous Systems of Medicine, Ceylon was recognised by the State Government. In all Ayurvedic Colleges, a single Diploma Course (Shuddha Ayurveda Course) with a common syllabus was introduced. However, the B.A.M. degree course with existing syllabus was allowed to

continue in the Ayurveda College, Trivandrum. To advise the Government in administrative matters and in the conduct of courses and examinations, an Advisory Board was constituted.

Madhya Pradesh : Twelve new Ayurvedic Colleges were established in this State during the year under report.

In the sphere of education 290 students were receiving training in Government Ayurvedic College at Raipur and Gwalior. Besides, students were being educated in the two State-aided Ayurvedic Colleges *viz.*, Rajkumar Singh Ayurvedic College, Indore and Asthang Ayurvedic College, Indore. One Senior lecturer from teaching department of Ayurvedic College, Gwalior was deputed to Ayurvedic Post-graduate Training College, Jamnagar.

The research work continued during the year under review. Under herbal research, two teams started survey work in Dhar and Guna districts and had collected 1,000 specimens of herbs and plants in Ayurvedic College, Gwalior. Under clinical research 20 patients were treated with Piply Virdhaman Rasayan to assess the efficacy on Grahani (Chronic Diarrhoea) and Shotha including Jalodar (Dropsy and Aseitis) in Gwalior.

A batch of 20 students passed the A.M.B.S. examination from Government Ayurvedic College, Gwalior and 18 students passed from State-aided Rajkumar Singh Ayurvedic College, Indore.

Madras : The Board Integrated Medicine, Madras was constituted and the question of registration of Practitioners of Integrated Medicine was taken up. Under another body of the Central Board of Indigenous Systems of Medicine, Madras, the registration of traditionally trained or (hereditary practitioners) with ten years of practice, was taken up.

There was only one teaching institution in Ayurveda, Siddha and Unani Systems of Medicine in the State *i.e.* College of Integrated Medicine, Madras, giving instructions for G.I.I.M. Course of 5½ year duration. With the assistance of the Central Government, the Government of Madras have sanctioned a research scheme in Ayurveda, Siddha and Unani Systems of Medicine. The Government of India sanctioned a sum of Rs. 2,000 per bed for 50 beds per year for the purpose.

Mysore : The medical relief in Indigenous Systems of Medicine (Ayurvedic and Unani) was provided in the Government Hospitals, Dispensaries and in other Dispensaries maintained by the local bodies. The total number of such institutions was 461 with 330 beds, where 443,538 out-door patients and 5,836 in-door patients were treated. 9 new hospitals and 1 dispensary were opened during the year under report.

There was no registration Act for the Practitioners of Indigenous Systems of Medicine in the State. A bill called "Mysore Ayurvedic and Unani Practitioners Registration and Medical Practitioners Miscellaneous Provision Bill, 1958" was introduced in the State Legislature and it was still under consideration.

L.A.M.S. and L.U.M.S., (Licentiate in Ayurvedic Medicine and Surgery and Licentiate in Unani Medicine and Surgery) were issued in four Ayurvedic and Unani Colleges in the State to candidates after completion

of a regular course of 4 years training and 9 months compulsory apprentice physicians training. Diploma in Shuddha Ayurvedic Course (D.S.A.C.) was issued in Shuddha Ayurvedic Colleges in the State to candidates after a regular course of training for four years and compulsory practical training of six months. The Diploma Course in Ayurveda (L.A.M.S.) was up-graded to a Graduate Course (G.C.A.M.) The L.A.M.C. Course in Ayurveda was up-graded to a Degree Course (G.C.A.M.) during the year 1959. A Board of Research was constituted by the State Government to organise research in Ayurveda during the year under review.

Orissa : Two Ayurvedic Hospitals, 141 Ayurvedic Dispensaries and 1 Unani subsidised Dispensary were functioning in the State. There was a legislation to regulate the registration of Practitioners of Ayurvedic and Unani Systems of Medicine. Gopabandhu Ayurvedic Bidyapitha at Puri qualify students for D.A.M.S. and Diploma is awarded by the Orissa Ayurvedic Examination Board. The course of study is of 4 years and comprises the study of Ayurveda supplemented by Eastern System. 18 students qualified from the Vidyapitha and 60 beds were provided in the teaching hospital attached to the Vidyapitha.

There was no separate Research Institute in the State, but research in Indigenous Systems of Medicine was carried out in the Gopabandhu Ayurveda Vidyapitha, Puri.

Punjab : To meet the increased demand of trained Ayurvedic Physicians, the Ayurvedic Vibhag Vidyalya functioning since 1912 was raised to 5 year degree course. 30 students were admitted during the year under report. Arrangement for training of Up-Vaidyas (Compounders) were also provided in the College. A 50 bedded Ayurvedic Hospital is attached to the College, where 15,945 patients were treated. To cater to the needs of allied dispensaries with standard medicines, the Pharmaceuticals Section was established. It was envisaged that 250 Ayurvedic and Unani Dispensaries should be opened during the Second Five Year Plan period. Upto the end of 1959, 282 Ayurvedic and Unani Dispensaries were functioning. In these dispensaries, which are mostly in rural areas, 33,54,325 patients were treated.

Uttar Pradesh : There were 18 Ayurvedic and Unani Colleges, which imparted medical education in this State. Of these one was of the State Government and the others were private institutions aided by the State Government. The State Ayurvedic College, Lucknow is affiliated to Lucknow University ; the Ayurvedic College, Varanasi to Benaras Hindu University ; Tibbia College, Aligarh to Muslim University. The rest are affiliated to the Board of Indian Medicine, Uttar Pradesh, Lucknow. The institutions were giving 5 years training to Vaidyas and Hakims and 2 years training to Sahayak Vaidyas. The State Ayurvedic College, Lucknow granted scholarships of Rs. 50 each to 20 best students of the year under report.

West Bengal : Three Ayurvedic Colleges with attached Hospitals, remained affiliated to the General Council and State Faculty of Ayurvedic Medicine in the State. The number of beds in these Hospitals was 340. There were a few more private Ayurvedic Hospitals and Charitable Institutions not affiliated to the aforesaid Council, which also catered to the needs of ailing patients.

There was no Act in force during the year 1959. The General Council and State Faculty of Ayurvedic Medicine, West Bengal functioned during the year under report. The main functions of the Council are (1) to maintain

register of registered Ayurvedic Practitioners (2) to hold examinations according to the syllabus prescribed by the Council and to grant Diploma to the successful candidates (3) to inspect and affiliate Ayurvedic teaching institutions and (4) to register and control the Ayurvedic Pharmacies and Charitable Institutions etc.

A Committee with Chief Minister of the State as a Chairman and Minister of State-in-Charge of the Department of Health, the Director of Health Services and five eminent Ayurvedic Physicians as members and an Assistant Secretary, Department of Health as Member-Secretary was formed under Resolution No. Medl./3693/3c/16/59 to (1) make review of the syllabus of the course for the General Council and State Faculty of Ayurvedic Medicine and (2) find out to what extent subjects of fundamental sciences like anatomy, physiology, pathology etc., can be included in the course of study for qualifying in Ayurvedic Medicine. A Sub-Committee was also formed to draw up a syllabus for the Diploma in Ayurvedic Medicine on the above lines.

Delhi : The condensed degree course for Ayurveda diploma holders was introduced in July, 1959 and 32 students were admitted to Post-Graduate Course in the Ayurvedic and Unani Tibbia College, Delhi. The Research Ward, which functioned for 4 years till 31st December, 1959, had to be closed for want of funds. Clinical research works on Bala-Jakrita and Bala-Shosta and Asitis were continued.

Himachal Pradesh : No Unani Institution was functioning in this territory during the year under report. 101 Ayurvedic Dispensaries, including two mobile Ayurvedic Dispensaries, functioned throughout the year. Eight more Ayurvedic Dispensaries were opened. 5,56,755 persons were treated in Ayurvedic Institutions.

Two Ayurvedic Pharmacies were functioning, where certain medicines for Ayurvedic Dispensaries were manufactured under the supervision of trained personnel.

The registration of Ayurvedic Physicians was not in vogue. However, the East Punjab Ayurvedic and Unani Practitioners Act, 1949, is being extended to Himachal Pradesh to provide for the registration of Practitioners of these Systems of Medicine. There were no facilities for training of Ayurvedic personnel in this territory and so the candidates were sent outside for the purpose.

Tripura : There was only one Ayurvedic Dispensary under the Council. The Dispensary provided out-door facilities to the patients and introduction of in-door beds was under contemplation. The Registration Act was not in force during the year under report. The number of male, female and children patients treated were 14,800, 4,200, 1,082 respectively.

Homoeopathy and Unani Systems of Medicine :

The terms of reference of the Sub-Committee on Homoeopathy to were appointed during the year under review.

The terms of reference of the Sub-Committee on Homoeopathy to re-examine the research scheme launched by (1) D.N.D.C. Homoeopathic Medical College, Calcutta, (2) Midnapore Homoeopathic Medical College,

Midnapore and (3) Andhra Provincial Homoeopathic Medical College and Hospitals, Gudivada. The Sub-Committee was authorised to visit the institutions if necessary, and satisfy themselves that the institutions were properly equipped to conduct research on right lines.

The activities of the States in respect of Homoeopathic Medical Relief, Education and Registration during the year 1959 are summarised below:—

Bihar: Grants were given to Homoeopathic Dispensaries for rendering medical relief by the State Government. The State Government have enacted a legislation known as "Bihar Development of Homoeopathic System of Medicine Act, 1953" to provide for the development of Homoeopathic System of Medicine and to regulate its teaching and practice in the State of Bihar. The Board prepared syllabus and courses of studies for degree and diploma courses, which were under consideration of the State Government. The Government were also requested for establishment of a College of Homoeopathy at Patna.

Upto the end of the year 1959, about 10,339 persons were enlisted under Section 29 of the Act. Applications for registration under Section 22(2) were entertained.

Kerala: There were four Homoeopathic dispensaries in the State. A total number of 150 practitioners were on the register of the Council of Homoeopathic Medicine.

Orissa: Five Homoeopathic Dispensaries were functioning in the State during the year 1959.

Madras: The Government of Madras recognised the System of Homoeopathy in this State. A Committee was appointed during the year 1959 for the purpose of training rules and regulations in regard to the registration of Homoeopathic Practitioners, the recognition of Homoeopathy teaching institutions etc. The Committee had accordingly met and submitted the draft rules and regulations in this regard for approval of the State Government. The Government had deferred the question of opening a separate Homoeopathic College and Hospital. The training of the rules regarding the practice and teaching of Homoeopathy will be done after the passing of Homoeopathic Act in the Madras Legislature.

Mysore: There were no Government Homoeopathic Hospitals, Dispensaries, Schools or Colleges in the State. But one private Homoeopathic College and two Homoeopathic Dispensaries were functioning. The Government sanctioned the grants to these two dispensaries. No committee was set-up in 1959 to make recommendations in regard to Homoeopathic System of Medicine. A bill called "Mysore Homoeopathic Practitioners Bill, 1958" was under the consideration of the State Legislature during the year under review.

Rajasthan: No Homoeopathic registration have so far been enacted and enforced by the State Government. The Homoeopathic Practitioners were enlisted under Indian Medicine Act. There was no Homoeopathic College imparting education in the State of Rajasthan. Seven Homoeopathic Dispensaries at Ajmer, Jhalrapatan, Shahpura, Seethal, Sarunda, Kolayat and Karnisar functioned during the year under review.

Uttar Pradesh : There were two affiliated Homoeopathic Medical Colleges *viz.*, (i) National Homoeopathic Medical College and Hospital, Lucknow, which got recurring grant from the State Government and was managed and controlled by the Board of Management constituted by the Government and (ii) Allahabad Homoeopathic Medical College and Hospital, Allahabad, was run by private enterprise. 13,276 Homoeopathic Practitioners were registered upto the end of 1959 with the Board of Homoeopathic Medicine, Uttar Pradesh.

West Bengal : The Homoeopathic System of treatment was recognised by the State Government in 1941 and the General Council and the State Faculty of Homoeopathic Medicine was established in 1943. After partition of Bengal, the West Bengal Government amended the Statutes and the Homoeopathic Faculty was allowed to continue in this State. The registration of Homoeopathic Practitioners continued during the year under report under rules framed by the Council as empowered by the Statutes. The curriculum of study was 4 years and the name of the diploma is D.M.S. There were five institutions affiliated to this Council with teaching facilities. The Government of India, as advised by the Advisory Committee on Homoeopathy, granted Rs. 40,000 for research work on Homoeopathic drugs to two institutions *viz.*, D.N.D.E. Homoeopathic Medical College and Hospital and the Midnapore Homoeopathic Medical College and Hospital. The Homoeopathic drugs were provided on healthy human beings and the reactions both clinical and pathological were recorded. The Government of West Bengal was maintaining 30 beds at the Calcutta Homoeopathic Medical College and Hospital for the public.

Delhi : The Board of Homoeopathic System of Medicine, Delhi, registered about 50 Homoeopathies in the Union Territory of Delhi in 1959. The question of training, syllabus etc., was still under consideration of the Board.

CHAPTER XV

VOLUNTARY ORGANISATIONS AND ASSOCIATIONS

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VOLUNTARY ORGANISATIONS AND ASSOCIATIONS

(i) The Indian Red Cross Society, New Delhi.

The Indian Red Cross Society has now completed 40 years of useful service to the people of this country.

Flood Relief: Severe floods caused considerable damage in the States of West Bengal, Jammu and Kashmir, Assam, Bombay, Mysore, Punjab, Orissa and Bihar. Supplies of milk powder, blankets, clothings, disinfectants, antibiotics, anti-malarials, sulpha drugs and other medicines and vitamins for the relief of flood victims and also for distribution among undernourished persons were sent out during 1959 to all its State branches. For the purchase locally of emergently needed relief articles, cash grants totalling Rs. 1,72,000 were also given to the branches.

Relief Activities: Nearly 300 institutions including Hospitals, Dispensaries, Maternity and Child Welfare Centres and Orphanages etc., received help from the Society during 1959.

During the year under review the Society sent consignment of vitamins, antibiotics, anti-malarials and sulpha drugs and some clothings for distribution to the destitude Tibetans in Assam State. Through out the year the Society worked in close collaboration with the Central Relief Committee for Tibetans. The Director of the Hospital Services gave advice regarding medical arrangements at Missmari Camp.

Maternity and Child Welfare: The Maternity and Child Welfare Bureau of the Society provided services in the backward areas of Tehri-Garhwal in Himalayan Region. At the main and sub-centres 136 maternity cases were conducted and 1,659 received pre-natal and post-natal care. Home visits by Red Cross personnel in that area totalled 23,743 and minor ailments treated during the year under report at all the centres numbered 16,123.

Hospital Services: The services provided to the service and ex-servicemen through the Hospital Services Section, on which over Rs. 4 lakhs were expended during 1959. Amenities such as in-door games, newspapers and books were supplied to Service Hospitals in India Command, Field Medical Units in Jammu and Kashmir and also to the Medical Unit in Indo-China and to the Section Hospital for our troops stationed in Egypt.

Junior Red Cross: The Junior Red Cross movement continued to progress. Inter-State Junior Red Cross Study Centres were held during the year by the Punjab and Andhra Pradesh Branches. The Society also participated in the international red cross study centres held by the Canadian Red Cross Society in Toronto in the month of August, 1959 by deputing a junior from Bombay State. Two Juniors, a girl from Finland and a boy from Pakistan visited India to see various activities of the Junior Red Cross.

Fund Raising Campaign: The 1959 Fund Raising Campaign, inaugurated on 31st October, continued throughout the month of November all over the country. Keeping in view the international aspect of Red Cross movement, the Society had been rendering assistance and contribution to the

World Health Organisation towards its Global Malaria Eradication Programme.

Blood Transfusion Service : The Indian Red Cross Society worked on an ambitious programme of setting up of an up-to-date Blood Bank in Delhi. One private trust, hearing at the Society's endeavour, made a donation of Rs. one lakh to form a nucleus towards the fulfilment of this programme.

Publicity : Health propaganda was one of the principal peace-time activities of the Indian Red Cross Society. With its net work of Branches through out India, the Society carried on health education work by pamphlets, posters, charts, magic lanterns, slides, films and also by organising health talks, exhibitions and health weeks. Two quarterly journals "Indian Red Cross Journal" and "The Indian Junior" continued to be published by the Society.

Red Cross Museum : A Red Cross Museum meant for the preservation of models, trophies, badges and various other articles associated with the different stages of development of Red Cross in India as well as for an effective visual representation of its diverse humanitarian activities was opened on the 10th December, 1959 at the Headquarters Secretariat Building.

Milk Feeds for School Children : The Prime Minister of India inaugurated on the 17th October, 1959; a scheme of milk distribution to 30,000 children studying in 75 Municipal Primary Schools in Delhi. A scheme was launched by the Municipal Corporation of Delhi with 3,00,000 lbs. of milk powder supplied by the Indian Red Cross Society for giving free milk every day to poor students of Municipal Primary Schools. During the year under report the Society supplied artificial limbs to 19 deserving civilians.

Development of Nursing Services : For the development of Nursing Services in the country the Indian Red Cross sent two of its Officers to 4 States to instruct 103 registered professional Nurses in the nursing programme undertaken by the Red Cross Society.

Branches and Membership : At the end of the year the Society had on its role 18 States and 417 districts and sub-district branches with a total adult membership of 1,22,168.

(ii) The St. John Ambulance Association and Brigade (India), New Delhi.

The St. John Ambulance Association in India was established in 1910 mainly with the following objects in view :—

(a) Instructions to persons in rendering first aid in case of accident or sudden illness and in the transport of the sick and injured;

(b) Instructions to persons in the elementary principles and practice of nursing and hygiene, especially that of the sick-room;

(c) The provision and distribution, by sale or presentation, of ambulance material and the formation of ambulance depots in or near mines, factories and other centres or industry and traffic;

(d) The organisation of Ambulance Corps, Invalid Transport Corps, Nursing Corps and Voluntary Aid Detachments;

(e) To assist the sick and wounded in war ; and

(f) The promotion of instruction and work for the relief of suffering of the sick and injured in peace and war, independently of class, nationality or denomination.

The Association has since 1910 issued over 14,61,300 certificates of proficiency in First Aid, Home Nursing, Hygiene and Sanitation and Mothercraft and Child Welfare and over 74,700 tokens for special proficiency in these subjects such as vouchers, medallions, labels and pendants. In addition to, over 1,68,200 certificates were issued in the elementary course for school students known as Mackenzie School Course in First Aid, Hygiene and Sanitation.

The object of the Association is not to rival but to aid the medical man and the subject matter of instructions given at the classes qualifies the pupil to adopt such measures as may be advantageous pending the doctor's arrival or during the intervals between his visits.

During the year 1959, over 1,43,800 persons attended courses of instruction in First Aid, Home Nursing, Hygiene and Sanitation and Mothercraft and Child Welfare. Of these 1,08,666 qualified for the Association's Certificates; *i.e.* 1,00,458 in First Aid, 7,392 in Home Nursing, 447 in Hygiene and Sanitation and 369 in Mothercraft and Child Welfare.

The Association had five grades of membership *viz.*, Patrons, Honorary Councillors and Life Members, who pay Rs. 1,000, Rs. 500 and Rs. 100 in single payment and annual members and annual associates, who subscribe Rs. 5 and Re. 1 per annum respectively.

The President of India is the President of the Association. Its general business is conducted by an Executive Committee.

The St. John Ambulance Brigade is a uniform disciplined body of men and women, all of whom are holders of first aid and in the case of women, also of home nursing certificates. The Brigade organisation comprises 20 districts covering a number of States and Railways in India with headquarters at Bangalore, Bhubaneswar, Bombay, Calcutta, Chandigarh, Delhi, Gorakhpur, Hyderabad, Indore, Jaipur, Lucknow, Madras, Patna and Shillong. At the close of the year 1959 there were 1,120 Brigade Divisions, 603 Ambulance, 133 Nursing, 282 Cadet Ambulance and 102 Cadet Nursing with a total personnel strength of over 26,000.

(iii) The Tuberculosis Association of India, New Delhi.

The Tuberculosis Association of India has, during the past two decades, done a fair amount of pioneering anti-tuberculosis work on the non-official side. Its activities included Seal Sale Campaign and Organisation of the Training Courses. Through its institutions the Association was able to demonstrate the various aspects on tuberculosis control measures. The Domiciliary Service Scheme carried out in one of its Institutions *viz.*, the New Delhi T.B. Centre has been acclaimed as a model one by well known Tuberculosis Workers in India and outside. The Technical Committee of the Association reviews periodically the tuberculosis problem in the country and makes proposals for implementation by Governments and Associations.

In the 1959 the Seal Sale Campaign was 10th one organised by the Association. A total of 93,13,000 seals were distributed to the States, the largest quantity having been taken by the Tuberculosis Association of Uttar Pradesh. From the 10th campaign the cost of a seal has been fixed at

10 P. instead of 5 P. The campaign started, as usual, on 2nd October—Mahatma Gandhi's Birthday. The business community extended their full support, as usual, for publishing the Seal Safe Campaign. For 10th campaign 175 firms donated newspapers space totalling about 4,000 column inches valued approximately at Rs. 80,000, while 147 firms gave cash donations for the same purpose amounting to Rs. 20,328. These donations were in excess of the previous years of 700 column inches of newspaper space and by Rs. 228 in cash.

The training programme of the Association consists of the training of Health Visitors, Special Workers, Nurses and Doctors. Doctors undergoing D.T.D. Course of Delhi University receive part of their training in New Delhi Tuberculosis Centres and part in the Kasauli Sanatorium. A Post-graduate Refresher Course in Tuberculosis was organised by the New Delhi T.B. Centres from 23rd November to 5th December, 1959 and 23 Doctors attended the Course. The training for Health Visitors was re-orientated from 1959. Only 11 candidates were selected as suitable to undergo training. Training was given, as usual, in Delhi for 8 months and for one month in Kasauli Sanatorium. The facilities available in the New Delhi T.B. Centre, the Lady Linlithgo Sanatorium and the Mehrauli T.B. Hospital were utilised by the College of Nursing for giving practical training to their student Nurses. The facilities in the Mehrauli T. B. Hospital were utilised also by the Lady Hardinge Medical College and Hospital and the Holy Family Hospital for training their pupil Nurses in T.B. work. During 1959, 772 patients were treated in the Kasauli Sanatorium of whom 423 were discharged. The total number of skiagrams taken was 2,038 and the number of fluroscopy examinations was 353. The training facilities available in the institution were used by Governments, Universities and Associations for training Doctors, Nurses and Health Visitors. The cost of maintaining the instituitions in 1959 was Rs. 2,109·72 per bed. The various sections of the New Delhi Tuberculosis Centre continued with their useful work. The Clinical Section registered 7,475 new cases of whom 4,243 were of tuberculosis. The indoor cases admitted for observation numbered 346. During the year under report, 11,916 screening were done, 31,891 skiagrams were taken and 63 tomograms also were done. The Organised Home Treatment Section covered 7,624 cases. The Mehrauli T.B. Hospital, which has also an Out-patient Department attached to it, continued to function as a diagnostic and treatment centre. The Out-patient Department examined over 14,100 persons of whom 3,197 were found to be tubercular. The number of patients treated in the hospital was 1,006 of whom 674 were discharged. It may be mentioned that out of 306 beds in the Hospital 54 were meant for the treatment of tubercular children and 52 were meant for isolation of advanced cases.

The employment services maintained by the Association continued to receive request from qualified doctors, trained social workers and health visitors for finding out suitable employment for them. For assisting qualified and trained personnel in securing suitable employment in T.B. Associations the employment services of the Association recommended for securing suitable jobs for them.

The Indian Journal of Tuberculosis completed six years of its publication in September, 1959. It is a quarterly journal devoted mainly to articles on the various aspects of tuberculosis and its control measures. It also serves as a handbook showing details of T.B. institutions in the country, how they are staffed and what facilities are available for treatment.

(iv) The Hind Kusht Nivaran Sangh, New Delhi.

The Hind Kusht Nivaran Sangh is functioning with its headquarters in New Delhi and has 10 branches in various States. It has the privilege of having its President, the President of India. Its affairs are managed by a governing body consisting of Chairman, Honorary Treasurer and Honorary Secretary. The governing body is represented by officials and non-officials including representatives of other voluntary agencies engaged in leprosy work. An Organising Secretary and a Health Education Officer are attached to it. The Organising Secretary tours the various States, energises the State branches, visits leprosy institutions which ask for his advice, exercises stimulating influence on Government and voluntary agencies and constantly promotes the modern outlook on leprosy. Among the institutions, which sought and obtain his advice during 1959, were the Shivananda Rehabilitation Centre, Kukdpalli, Hyderabad; Navjivan Nilaya, Bangalore; After Care Association for the Rehabilitation of Leprosy Patients, Cuttack and Ryder Cheshire Foundation, Raphael, Dehra Dun. At the invitation of Group Captain Leonard Cheshire, he visited Dehra Dun and Rishi Kesh and made a report on the leprosy situation in the Dehra Dun, Rishikesh and Tehri Garhwal, suggesting a scheme for a hospital at Raphael in Dehra Dun with a mobile ambulatory service to go round and take leprosy treatment to the inaccessible villages of this remote region. The Health Education Officer made a study of the social aspects of leprosy with a view to provide a basis for a mass education programme. He undertook the study at the Leprosy Subsidiary Centre, Savda, East Khandesh District, Bombay State in collaboration with the Government Unit. He was also making similar study with particular reference to urban conditions in association with the social workers of the Greater Bombay Leprosy Control Scheme.

During the year under report, the Sangh organised a Physiotherapy Technician Training Course at the Orthopaedic Research Unit of the Christian Medical College and Hospital, Vellore. 8 candidates were trained for a period of six months. The Sangh was indeed fortunate to have Dr. Brand's help in training such Physiotherapists.

A suggestion was made that a voluntary agency like the Hind Kusht Nivaran Sangh, which has a wide net-work of branches and which has a tradition of close cooperation, should undertake an educational work for leprosy at all level and over the whole country.

In December, 1959, the Sangh in collaboration with the Bombay State Branch organised the VII All India Leprosy Workers Conference. The Conference reflected the multifaceted progress of leprosy work in India. A well got up souvenir was published on the occasion which was highly informative on many aspects of leprosy. The publicity material published by the Sangh was stocked and issued from the Red Cross Stores Depot through the courtesy of the Indian Red Cross Society. The total value of the articles issued from the Depot was Rs. 2,993. This included 5,702 booklets and 4,599 posters. The quarterly journal "Leprosy in India" continued to serve a useful purpose. In 1959 its publication cost was Rs. 3,559. The Sangh also continued to assist the circulation in India of the quarterly "Leprosy Review" published by the British Leprosy Relief Association, London.

Brief Notes on State Branches :

Andhra Pradesh : The work of the branch consisted chiefly of leprosy survey, teaching and publicity. The survey work started in Telangana region.

Propaganda work was carried out in leprosy subsidiary centres by Medical Officers, Medico-Social Workers, non-medical assistants through posters and pamphlets etc. Posters depicting various States of leprosy were also being exhibited in the centres. The "Leprosy Week" was successfully celebrated from 20th to 26th December, 1959 at Hyderabad, Sikanderabad and in all over the Municipalities of the districts by arranging public meetings.

Bombay : Leprosy work in the State was conducted by the State Government and other voluntary institutions. The Hind Kusht Nivaran Sangh, Bombay was running Leprosy Clinic at Ambewadi as in the past and maintaining a Leprosy Health Education Officer. Survey work was also carried out during the year 1959 in the two districts of Nanded and Baroda of this State.

Madras : The Madras State Branch is chiefly a publicity and welfare organisation. Publicity work was done by audio-visual equipment, pamphlets, exhibitions, public meetings and by personal contacts. The State Branch has 11 district sub-branches. These sub-branches run their own clinics, subsidise the work of other agencies and assist in effective functioning of clinics.

Mysore : The Mysore State Branch in addition to paying remuneration to some Government Dispensaries, the Medical Officers also incurred expenditure for observation of major feasts in Central Leprosarium, Bangalore for the benefit of in-patients and other expenditure like special drugs, occupational therapy, rehabilitation and sports for school children in the Leprosarium.

Orissa : The State Branch maintains two Domiciliary Treatment Centres in the State. Besides, the Sangh met the entire cost of maintenance of 30 patients out of 50 inmates in the Cuttack Leprosy Home and Hospital. It conducted a publicity week during the year 1959.

Punjab : One Leprosy Relief Worker was employed by the State Branch of the Sangh at Kothi Khod in Palampur Tehsil. He conducted anti-leprosy work in Kothi Khod and Swar and the relief worker was responsible for distributing sulphones and other medicines to all the leprosy patients there. The Propaganda work was, as usual, done by the anti-leprosy staff during their tours to Kangra District.

Uttar Pradesh : The State Branch gave an annual grant of Rs. 1,000 to six organisations for carrying out anti-leprosy work. Besides the Sangh gave Rs. 1,000 to three Honorary Organising Secretaries for carrying out publicity and educational work in the Central, Eastern and Northern Zones. The propaganda materials dealing with the facts about leprosy were printed and distributed on important occasions. The Christmas Week was observed as "Leprosy Week" in Uttar Pradesh during 1959.

West Bengal : The work of the Branch consisted chiefly of leprosy survey teaching and publicity. Surveys were undertaken in Malda, Midnapur districts. In addition to the leprosy surveys carried out in the areas, educative talks were given to the gatherings on leprosy. Leaflets were also distributed in such gatherings. A clinic was started in Kariali Bazar, a busy place situated between Harichandpur Union and Daulatpur Union. Attempts were made to start a home for healthy children of infectious parents.

(v) The Trained Nurses Association of India, New Delhi.

The year under report was an eventful one for the Association. The General Secretary was granted a travel grant for four months "to observe nursing education programmes in the U.S.A., England and elsewhere". The General Secretary represented the Association at a Study Conference held in Newzealand in May, 1959.

The President and the Secretary of the Student Nurses Association represented the Association at International Council of Nurses Board of Directors' meeting in Helsinki in July, 1959.

The annual conference held in Bombay in October, 1959 had a record attendance of 1,696 delegates from all parts of India; other countries that sent delegates included Egypt, Sudan and Iran.

The Association appointed an Expert Committee to prepare a "Memorandum on Nursing" to submit to the Health Survey and Planning Committee. The report was submitted in December, 1959.

Emphasis were placed on :—

(i) Raising funds for the building fund. The Association was granted Rs. 40,000 by the Government of India towards building programme.

(ii) Recruitment of members.

The Association agreed to accept the sponsorship of an international seminar on "How to Investigate Nursing Problems" organised by the International Council of Nurses in Delhi in 1960.

During the year under review, Rs. 16,290 were paid out for post-certificate and basic nursing education towards scholarships and a sum of Rs. 6,318 was given as monthly grants to 12 Nurses needing financial aid.

Towards the end of the year 1959. there was an increase of 124 members bringing the total to 4,926 in the Trained Nurses Association of India and 9,014 in the Student Nurses Association.

(vi) The All India Medical Licentiates' Association, Calcutta.

The All India Medical Licentiates' Association maintained its usual activities such as holding of scientific lectures, clinical meetings in the branch levels and provincial conferences. There was a Central Standing Committee meeting at Jhansi to discuss about the various health problems of the country and also about the handicaps of the medical licentiates.

Under the patronage and financial help of the Association, a research work was undertaken by one of the members on the evaluation of antibiotics and indigenous drugs in leucorrhoea.

During 1959, three new branches were set up one each in Uttar Pradesh, West Bengal and Andhra Pradesh. The provincial conference of the Association was held in West Bengal at the Model Town Kalayani. 400 medical personnel attended the conference, which was inaugurated by the Director of Health Services, West Bengal, Calcutta. Apart from discussion on the medico-personnel attended the conference, which was inaugurated by the Director of read out on different aspects of tuberculosis. The provincial conference of Uttar Pradesh was also held during the year under review at Jhansi.

Different problems of medical profession particularly in the State of Uttar Pradesh were discussed and various important resolutions were adopted.

The Association encouraged its members in particular and members of the medical profession in general to contribute scientific papers, as such contributions were considered of great help for refreshing the knowledge of members of the profession, particularly of those who were practising in rural areas.

The Association also tried for further amendment of the Indian Medical Council Act, so as to brush aside the distinction between the members of the medical profession so far as the schedule and alphabetical register are concerned. The re-opening of the condensed M.B.B.S. Course—at least in one Medical College in each State and D.T.M. Course engaged the serious attention of the Association.

The annual conference was held at Jhansi from 29th to 31st December, 1959. The Conference was inaugurated by the Union Health Minister and was attended by a large number of delegates and visitors from all parts of India.

The Indian Medical Journal is published every month as usual by the Association. Scientific articles, both in the research line and in line of refresher course to the general practitioners were regularly published in the journal. A special issue on the Employees' State Insurance Scheme was published by the Association in October, 1959.

The Association tried to cooperate through its chain of branches in all benevolent schemes sponsored by the Government and other philanthropic bodies to give relief to the people either in the curative or preventive side.

(vii) The All India Blind Relief Society, New Delhi.

The activities are summarised below :—

1. *Model Eye Hospital :* The Society runs a free Model Eye Hospital at Lajpat Nagar, whch is provided with a total number of 60 beds. The daily average attendance of the patients at the Out-door Department of the hospital was 100. The total number of patients attended were 29,836 and 1,002 new operations were performed. The old and new out-door patients treated were 15,171 and 13,663 respectively.

2. *Mobile Unit :* The number of patients attended by the Mobile Unit during the year 1959 at Ramgarh, Garhi, Julema, Jumeradpur, Basti Bawdi, Coolie Camp, Harinagar, Bapu Nagar and Mohemedpur were 399.

This Society delivered magic lantern lectures on care of eyes and prevention of blindness at different places during the year under review.

(viii) The All India Dental Association, Bombay.

The All India Dental Association made a considerable progress during the year, 1959. Its strength stood at 943 at the end of year 1959, which shows a rise of 129 members. Two members of the Association were sent on internship to U.S.A. for advance training in Dentistry. A dental health poster competition was organised on an all-India basis and prizes were

awarded to the winners of the competition. Several lectures were arranged by the Association to be delivered to the masses with a view to make them teeth conscious.

Research on dentistry was carried out under the scholarships awarded by M/s. Hindustan Lever Limited (Toilet Preparation Division). The 14th annual meeting of the All-India Dental Association was held at Bangalore from 19th to 22nd February, 1959. Approximately 275 dental surgeons from all over the country and abroad participated in this conference. The scientific session was declared open by the Minister of Health, Government of Mysore. During the scientific session, interesting dental films were shown, table demonstrations were arranged and instructive papers on different aspects of dentistry were read out.

The monthly journal of dentistry was published by the Association during the year under review.

(ix) The All India Women's Conference, New Delhi.

Seven of the branches of the All India Women's Conference at Bombay, Kerala, Kodaicanal, Calcutta, Karnatak, Hyderabad and Delhi have been running mobile medical vans since a number of years in order to provide medical facilities to isolated villages. In some of the above mentioned branches like Bombay, Calcutta, Kerala, maternity and child welfare work was also undertaken. The Calcutta Branch had also an eye-clinic since 1958. 1,50,000 persons were helped by these medical vans. Milk powder and multipurpose food was also given to under-nourished patients. Part grants were received from State Governments for this work. The annual expenditure per branch was over Rs. 10,000 and the balance was to be met with by the branches themselves.

Almost all the 275 branches (Sub-branches) supplied milk powder to under-nourished children and nursing mothers. Milk powder was donated by the various international organisations.

Distribution of medicines and sick-room requisites to the needy and poor and examination of school children were done by the following branches:—

Darjeeling, Calcutta, Bombay, Maharashtra, Gujarat, Hyderabad, South Madhya Pradesh, Surat and Kanpur.

The Maternity and Child Welfare Centres were run by North Madhya Pradesh, West Bengal, Indore, Madras State Branches. The East Khandesh Branch had a maternity home.

Visits and aid to poor and needy patients in hospitals were undertaken by the Madras, North Bengal, Surat, North Madhya Pradesh, Kanpur Branches. The Madras Branch also undertook an anti-Cancer campaign.

Family Planning Clinics were run and propaganda made by the Andhra, Berar, Surat, Indore, Karwar, Bangalore, Madhya Pradesh, West Khandesh, North Satara and Allahabad branches.

The Jamshedpur Branch was running a home for children of leprous parents. They contributed Rs. 10,000 for a bed in the hospital. A sum of Rs. 80,000 was also collected for the All India Women's Conference Children's

Ward in the Dalal Memorial Hospital, Jamshedpur. Health survey of children in a few wards was undertaken by the All India Women's Conference Branch at Surat. Baby-shows were also held by some branches. Medical clinics were run by a few branches.

Since last year 300 Village Extension Projects, formerly run by the Central Social Welfare Board, were taken over by the All India Women's Conference branches. In these branches health work would also have to be undertaken in the rural areas.

This health work was done besides other regular work of the All India Women's Conference branches, which conduct industrial classes, schools, montessori classes as well as literacy classes for adult women.

(x) The Bharat Sewak Samaj, New Delhi.

Health and sanitation is the top priority item next to increase in food production of the Bharat Sewak Samaj in its programmes and one of the objects of Samaj is to foster up health by making people health-conscious through health education to change the knowledge, feelings and behaviour of people and concentrate on developing such health practices which bring about the best possible state of well being. The Bharat Sevak Samaj has now its branches in all the States and at nearly all district headquarters and works through them. 1,500 Village Work Camps for youth and Urban Camps in all important towns are held every year for making people conscious about health and avail of the facilities provided by the Government, local bodies and private organisations and help in the control of diseases and promote sanitation by securing enlightened participation of the people in the planned National Health Programme in the spirit of Cooperative Community Service.

Sanitation weeks were held and the Bharat Sewak Samaj helped in anti-malaria and other anti-epidemic measures.

To ensure health and vitality of the people the Bharat Sewak Samaj chalked out a programme to improve sanitation in villages, which is practical and fundamental.

The items of the programme selected are :—

(a) Personal and home hygiene.

(b) Improvement of water supply.

(c) Disposal of excreta and urine.

(d) Utilization of village rubbish by composting.

(e) Management of rain water and the disposal of domestic waste water.

(f) Insect control.

(g) Spreading the cult of Yoga exercises by opening large number of Yoga Training Centres.

(h) Slum Services.

The programme is being implemented as follows :—

(a) Health Education in Homes, Schools, Factories and other Institutions.

(b) Training of Bharat Sewak Samaj Health Workers with the technical aid of the Local Health Directorates.

(c) Establishment of self-perpetuating rural sanitation units consisting of volunteers to assist Panchayats, Community Projects, Administrative Units, Local and District Boards etc. The unit consists of the sub-groups as follows :—

(i) Group of Social Workers, preferably women for personal and home hygiene.

(ii) Water supply improvement groups.

(iii) Disposal of night soil and urinal group, *i.e.*, latrine and urinal construction.

(iv) Group for compositing (disposal of refuse etc.).

(v) Insect Control Group for eradicating mosquitoes, flies etc.

(d) Family Planning Centres were started in some Pradesh by the Local Bharat Sewak Samaj.

(e) Charitable Dispensaries are being run under the charge of qualified and registered medical practitioners.

The Bharat Sewak Samaj mobile dispensary worked satisfactorily in Bombay during the year 1959 and was serving three slum areas twice a week each for two hours. For this purpose, the Trustees of the Sarvodaya Hospital, Ghatkopar provided a van fitted up for dispensary and qualified medical doctor and compounder at a nominal charge of Rs. 375 p.m. The Trustees bear all the cost of running and maintaining the van, medicine and injection. The public is levied a charge of 12 n.p. for medicine and 50 n.p. for injection. Where any person is not in a position to pay for his medicine he is given the medicine free.

Towards the end of the year the activities of the Samaj was rented from Chembur to cover another slum area in Kurla. The daily number of patients received treatment in these centres was nearly 100. The Bharat Sewak Samaj decided to approach the Anti-Tuberculosis Association to render medical help to a number of patients of these slum areas suffering from tuberculosis. The Association promptly responded. The Samaj also approached the Indian Red Cross Society Branch, Bombay, which donated Rs. 200 worth of medicines for the follow up treatment.

The Bharat Sevak Samaj was rendering medical help to the people of slum areas of Delhi. Five new dispensaries were started during the year 1959. This brought the total number of dispensaries run by the Bharat Sewak Samaj to 13, *viz.*, 7 in urban and 6 in rural areas. All of them are run on charitable basis and only nominal fees are charged. All of these are looked after by qualified and registered medical practitioners. The average daily attendance of the patients at these dispensaries was 500 and the monthly expenditure was Rs. 4,800.

In the slum areas the doctors visit katras and basties occasionally and explain to the people principles of maintaining good health. During their visits if they happen to find any case of acute illness they refer it to state hospital for treatment. In villages, dispensaries arrangements for maternity services were also made.

The sanitation drives, including educative propaganda, was intensively undertaken in five of the worst slums areas, where community centres were opened, each of which has a regular dispensary run by qualified medical practitioners. Weekly talks by Lady Health Visitors were also arranged with the result that women folk of the slums in such talks were benefitted in family planning.

Milk Distribution Centres, Yoga Health Centres, Training Centres also functioned and an Occupational Therapy Institute was also running in New Delhi under the Bharat Sewak Samaj.

Bihar : Sanitation weeks were celebrated in vilages and in slum areas of the State. Sanitation Committees were formed in 80 villages while 50 Youth Clubs were organised in villages to clean their villages and trench latrines. Environmental services were rendered in 50 villages and anti-malaria measures were undertaken in certain villages. Trench latrines and drains were constructed and repaired and cleaning of about 45 wells was undertaken and D.D.T. spray was also arranged in villages.

Gauhati : Flood effected areas were given medical help and other facilities with the cooperation of the State Health Department. Help was also rendered in mass vaccination operations. Lectures were delivered in villages and towns on health, rural sanitation, family planning, nutrition, anti-adulteration, liquor prohibition to control leprosy.

Nagpur : Besides cleanliness drives, which were arranged throughout the Pradesh from time to time, public meetings, discussions and symposiums were organised to popularize the health programmes. Yog Asanas Wing of the Bharat Sewak Samaj was formed and yog asanas were given in camps held in this Pradesh.

Trivandrum (Kerala) : Various Units of the Bharat Sewak Samaj were doing regular sanitation work. There were 3 medical units and 2 family planning clinics working under the Bharat Sewak Samaj. Slum areas were also attended to in regard to health and sanitation.

Rajkot : In 60 villages and 10 towns DDT was sprayed and cleaning of streets were arranged. With the cooperation of the Municipal Health Department, other works in connection with health and sanitation were carried out.

Mysore : In 19 villages intensive health and sanitation drives were taken up. During these drives, village drains, drinking water wells were cleaned and repaired, shrubs were removed, filth swept and removed; compost, manure and soak pits were dug up. Prizes were distributed to those who kept their houses neat and clean to encourage other villagers. Anti-measures were also taken up to control cholera epidemic which had broken in certain villages. Yoga health courses were arranged and 23 passed candidates started classes in their areas to promote yog asanas. Slum clearance was also conducted in certain areas.

Ahmedabad (Gujarat State) : An "Aroga Mandal" on taluka level was arranged at Himmatnagar, Sabarkantha district which will organise a chain

of village centres numbering nearly 20. This will serve as a charitable dispensary and several villages will be able to derive health benefits from this.

Puri (Orissa State): One homoeopathic dispensary was opened by the Bharat Sewak Samaj, where free medicines were given to patients. Besides, group meetings were held to discuss sanitary problems. In slum areas one mid-wife was in-charge of ante-natal and post-natal services.

Chandigarh (Punjab State): The work done in regard to health and sanitation in this region is as follows :—

1.	Smokeless hearths (chulas) built .	25
2.	Basti cleaned	1
3.	Dust bins cleaned . . .	100
4.	Pond filled	1
5.	Streets cleaned	8
6.	Nallah dug	1
7.	Manure pits dug	16
8.	Drains cleaned etc. . . .	2

In other areas also Bharat Sewak Samaj branches were doing intensive work in regard to health and sanitation.

Cleaning of drinking water wells, tanks, baolis, dustbins drains etc., construction of compost pits, manure pits, soak pits, smokeless hearths (chulas) and latrines were also undertaken by the Bharat Sewak Samaj.

(xi) The Gandhi Memorial Leprosy Foundation, Wardha.

The Gandhi Memorial Leprosy Foundation, Wardha entered into ninth year of its existence with increasing recognition in the country of its approach to the leprosy problem. Besides the survey, education and treatment work, being conducted in its eleven control centres, was increasingly consulted by private agencies and Governments in their programmes and plans.

Having been encouraged by the results obtained so far, the Foundation set itself to consolidate its control centres to tackle questions associated with the later phases of control. These pertain to the study of milestones, which at present are not well-known, in the decline of the disease, to maintaining the cooperation of the community and also for the maintenance of the morale of the field workers. The observations of such a study are expected to be useful when national leprosy control schemes are implemented.

The new cases detected during 1959 in the Foundation's eleven control centres, covering a total population of 2,25,000, were 343 of which 293 were registered. From the beginning of work, 6,409 cases were detected and 5,285 brought under treatment by the end of the year under report. Out of these, 66 cases of lepomatous type and 1,139 cases of non-lepromatous type had their disease arrested. Apart from the above, the extra zonal cases treated were 19,809.

The Foundation's Training Centre for para-medical work has so far trained 120 workers deputed by the State Governments and private agencies. 34 workers were under training. The Kerala Government's Training Centre at Mararikulam is also conducted by the Foundation. This is the second such centre, the first being at Amraoti, where the Foundation offered its help.

Two research projects, one at Vellore and the other at Bombay, were continued. The former concerns itself with rehabilitation and the latter with animal inoculation. A third project, which was making headway, was the trial of Ayurvedic drugs in leprosy at Bangalore.

The Secretary of the Foundation was appointed a member of the W.H.O. Expert Committee and attended its meeting at Geneva in August, 1959.

Two more private organisations were affiliated to the Foundation bringing the total to 32. Further work in connection with the co-ordination of the activities of these institutions will proceed with the finalisation of the State Plans and the National Plan. The Foundation has approved a plan to stimulate leprosy work in the four zones of the country and to recruit workers for such work.

With a view to bringing about closer ties between its workers scattered all over the country and encouraging discussion and thought on the various aspects of leprosy control, the Foundation is publishing for private circulation only a quarterly bulletin. The bulletin, the first issue of which appeared in January 1959, met a long-felt need.

It was decided to establish the headquarters of the Foundation at Wardha which will include various sections of work, including a Central Office, a Statistical Bureau, Information and Guidance Centre, Temporary Hospital for special cases, residential quarters etc.

(xii) The Indian Medical Association, Delhi.

The Indian Medical Association (I.M.A.) is a voluntary organisation of men and women, who are qualified in modern medicine and possess registerable qualifications as defined in the Indian Medical Degrees Act, 1916 (Act VII of 1916). It was established in 1928 and at present has a membership of 21,725. It has 16 States/Territorial branches and 595 local branches spread all over the country. The Association is the protector and the spokesman of the Indian medical profession. Its main objects are as follows :—

(1) To promote and advance medical and allied sciences in all their different branches and to promote the improvement of public health and medical education in India;

(2) To maintain the honour and dignity and to uphold the interests of the medical profession and to promote cooperation amongst the members thereof; and

(3) To work for the abolition of compartmentalism in medical education, medical services and registration in the country and thus to achieve quality among all members of the profession.

The Indian Medical Association is a member of the World Medical Association and is mutually affiliated to the British Medical Association.

The Indian Medical Association continued to publish its fortnightly journal during 1959. Besides, the Association publishes two lay health journals monthly *viz.*, "Your Health" (in English) and "Apka Swasthya" (in Hindi).

The Association is represented on other allied Governmental and voluntary national organisations and committees.

During the year under review, the Indian Medical Association co-operated with the Government and the voluntary agencies in celebration of the World Health Day, Family Planning Day, Anti-Leprosy Drive, National Malaria Eradication Programme, National Smallpox Eradication Programme etc.

A group of about 60 doctors, members of the Association, went on a study tour to Europe and U.S.S.R. The knowledge and experience gathered by these members of the medical profession ultimately contributed towards improvement in the standard of medical care in India.

Among others the following important subjects received attention of the Association during the year under report :—

(1) Health Programme in the Third Five Year Plan;

(2) Formation of a Defence Council for members of the medical profession;

(3) Indian Medical Degrees Act;

(4) Medical Education—Current problems and future developments;

(5) Service conditions of doctors working in Tea Garden Estates;

(6) Shops and Establishments Acts, and

(7) Racial discrimination and its effects on medical profession.

The Indian Medical Association continued its Internship and Residency Training Programme in the U.S.A., Canada and Ireland. 36 doctors, (Andhra Pradesh—3, Bihar—4, Bombay—4, West Bengal—8, Madhya Pradesh—4, Delhi—1, Orissa—2, Rajasthan—1, Madras—1, Uttar Pradesh—7 and Jammu and Kashmir—1) were sent by the Indian Medical Association for the term beginning July, 1959. Of these 7 were sent to Canada and 28 to U.S.A. One doctor received an appointment in Psychiatry in Dublin, Ireland. There were six ladies in the group. For the term beginning from 1st July, 1960, 19 doctors were able to secure positions in different hospitals in Canada through the I.M.A. Residency/Internship Training Programme.

(xiii) The Kasturba Gandhi National Memorial Trust, Indore.

The Kasturba Gandhi National Memorial Trust was founded in the year 1944 in the memory of Smt. Kasturba Gandhi at Kasturbagram, Indore district. The object of the Trust is to conduct and promote such activities as would be conducive to the general welfare of poor and needy women and children in rural areas of India.

During the year under report, besides its other activities in the field of education and training, it conducted 8 Hospital, 42 exclusive Arogya Centres and 80 Composite Centres (where medical activities formed the part of

the Centres) in various parts of India. The Hospitals included one leprosy home also. 8 hospitals are situated at the following places :—

1. Seetanagaram, East Godavary District, Andhra Pradesh.
2. Ras, Kaira District, Gujarat State.
3. Kasturbagram, Indore District, Madhya Pradesh.
4. Belsonda, District Raipur, Madhya Pradesh.
5. Saragaon, District Raipur, Madhya Pradesh.
6. Onandur, Tiruchirapalli District, Madras State.
7. Singanallur, Coimbatore District, Madras State.
8. Mazavanthangal (Leprosy Home), South Arcot District, Madras State.

The Trust also aided Kasturba Memorial Maternity Hospital, Gurza, Krishna District in Andhra Pradesh to the extent of 75 per cent of its actual expenditure.

These centres and hospitals distributed medicines to patients, rendered first aid treatment in common ailments, attended casualties, undertook tours of surrounding villages for propagating ideas about preventive aspect of work such as general health and sanitation, helped serious cases to be admitted in nearby big hospitals, examined ante-natal and post-natal cases and conducted deliveries at homes and at centres (where such facilities were available). Minor types of general and gynaecological operations were also undertaken at hospitals.

The following is the statistics of the work done at Arogya Centres, Composite Centres and the Hospitals (excluding for Leprosy Home) during the year under report:—

1. Number of patients treated	2,92,191
2. Examination of ante-natal cases.	18,089
3. Examination of post-natal cases.	10,428
4. In-door deliveries	3,031
5. Domiciliary deliveries	3,175
6. Minor operations	253
7. Gynaecological operations	108

The Leprosy Home known as Kasturba Kushta Nivaran Nilayam was started in the year 1946 with an out-patient ward and later facilities were extended to in-patients also. As the healing work proceeded, the idea took shape of control in the area by conducting surveys, detecting cases in early stages of the disease, following up cases to their homes, studying their contacts and above all reaching out D.D.S. to every patient or at least as near as their villages. A very important item of treatment work is the "Village Treatment Scheme" under this scheme D.D.S. is given to all cases of leprosy at their own doors by Kustha Nivaran Nilayam Sevikas under the supervision of the Medical Officer. The regularity of attendance under

this scheme is markedly high. Practically all cases, except a very few, who occasionally go away from the village, are treated. Sometimes they are traced to their homes for treatment. The following is the statistics of the work done at the Kasturba Kushta Nivaran Nilayam:—

I. Indoor Patients	
1. New admissions	17
2. Number of discharges	19
3. Number of cases at the end of the year	40
II. Out-door Patients centres in the nearby 7 villages	
4. Number of cases under treatment at the end of the year	2,285
5. Number of cases who regularly attended during the year	1,459
6. Number of new admissions during the year	563
III. Intensive Village Treatment Scheme	
7. Number of villages served	21
8. Number of cases under treatment	1,167
9. Number of lepromatous cases	267
10. Number of cases who regularly attended (both types)	1,102
11. Number of new admissions during the year	107
12. Number of deletions	142
13. Daily average attendance during the year	1,024

The Trust had also an Advisory Medical Board under the Chairmanship of Dr. Jivraj M. Mehta to advise the Trust and its Chairman in regard to its medical policies and other specific schemes that come up for consideration before the Board of Trustees from time to time.

The Trust is a recognised agency for imparting training in Auxiliary Nurse and Midwives Course which is of two years. The examinations are coducted and supervised by the Examination Committee of the Board.

During the year under report, 24 women candidates were trained as Auxiliary Nurse and Midwives under the auspices of the Trust for service in the village centres of the Trust.

(xiv) The Rockefeller Foundation in India, New Delhi.

The Rockefeller Foundation in India maintained close cooperation with the Government of India and the various State Governments including Medical Colleges and Research Institutes during the year 1959. Its programmes continued to be on improvement and expansion of medical education in India. To provide centre for the neighbouring cities of Delhi and New Delhi, which can become headquarters for both Indians and foreign scholars, scientists, writers and men of affairs, a group of Indian cultural leaders has organised the India International Centre, incorporated in March, 1959. The Centre will work closely with such other institutions in New Delhi as University of Delhi and the Indian Council of world affairs. Nearly all of

the India's 38 Universities have enthusiastically endorsed plans and purposes of the centre and have joined it as institutional members pledged to give recurrent financial support. During 1959 the Rockefeller Foundation made two grants totalling $ 834,135 as a contribution to development of India International Centre. Fellowships on subjects of Pharmacology, Anatomy and Experimental Embryology, Orthopaedic Surgery, Pharmacology, Public Health (Epidemiology), Sematology were granted by the Rockefeller Foundation during the year 1959. Professors of Physiology, Surgery and Medicine of the All-India Institute of Medical Sciences, New Delhi and the Deputy Director (Administration) of the same Institute were granted travel-grants and the Director of Medical Services, Andhra Pradesh Government and two doctors of Bombay were granted travel-grants for study in various subjects of medical sciences abroad.

The All India Institute of Medical Sciences, New Delhi received appropriations for the purchase and shipment of research equipment for the pre-clinical and clinical departments amounting to $2,000,000 during the year under review. Grants-in-aid amounting to $30,060 was given to Lucknow University for the salaries of Physicians and Surgeons who were assisting in the development of the Intern-Residency Programme at the K. G. Medical College, Lucknow. For research in Cytology in the Department of Zoology, Institute of Sciences of Bombay, $ 2,050 and for research in Virology equipment for Cardio Vascular Laboratory in Thoracic Surgery Department, Christian Medical College, Vellore, $ 20,000 was granted. $ 6,000 was also granted for the use by the Institute of Paediatrics in the purchase of equipment for cardiological investigations in the Madras Medical College during the year 1959.

Interest for nursing education was maintained by award of a fellowship to the Sister Tutor, College of Nursing, New Delhi for Nursing Education in the Teachers' College, Columbia University during the year under report.

(xv) The Mission to Lepers Purulia, West Bengal.

During 1959 the Mission to Lepers continued its service in India to the sufferers from leprosy. The inmates under treatment at the end of the year were 8,149. The number of out-patients terated during 1959 was 47,306 of whom 20,136 cases improved and the number of cases arrested or became symptom-free was 5,551.

In this service the Mission was encouraged by the Central Government making capital grants to various of its institutions for the up-grading of their work.

The research work at Karigiri was continued and gave encouraging results. Although an increasing stress is being placed on treatment of out-patients in their home environment the Mission's service to those needing institutional isolation was maintained. Appreciable help was also given to other organisations in the way of training and teaching staff requiring instruction in anti-leprosy work.

CHAPTER XVI

WORLD HEALTH ORGANISATION AND UNICEF

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WORLD HEALTH ORGANISATION AND UNICEF

(i) World Health Organization.

India has been a member of the World Health Organisation since its inception in 1948 and has taken active interest in its various activities. During the year 1959, the Indian Public Health Workers were appointed as members of W.H.O. Expert Advisory Panels on Environmental Sanitation, Health Statistics, Tuberculosis, Milk Hygiene, Leprosy, Rabies, Medical Care, Local Health Services, Biological Standardisation and Cardio Vascular Diseases.

The W.H.O. provided assistance by way of expert technical advisers, field workers and also a limited amount of equipment for projects connected with Tuberculosis, Public Health Administration, Nursing, Health Education, Maternal and Child Health, Environmental Health, Education and Training. The number of international experts provided by the W.H.O. during the year under review is shown below:—

	PROJECTS	No. of international experts provided by W.H.O. during 1959
	1	2
1.	Tuberculosis Control and Training Centre, Nagpur (India 23 TA) .	4
2.	Tuberculosis Control and Training Centre, Hyderabad (India 43 TA).	4
3.	Tuberculosis Chemotherapy Centre, Madras (India 53 TA) . .	6
4.	National T. B. Programme (India 103 TA)	11
5.	Trachoma Pilot Project, Uttar Pradesh (India 101 Regular) . .	1
6.	Public Health Programme, Rajasthan (India 106-TA) . . .	2
7.	Public Health Programme, Punjab (India 107-Regular) . . .	3
8.	Public Health Programme, Bihar (India 145-TA)	2
9.	Public Health Programme, Uttar Pradesh (India 146-Regular) . .	2
10.	Public Health Programme, Kerala (India 147-Regular) . . .	2
11.	Public Health Programme, Mysore (India 148-TA)	2
12.	Public Health Programme, Madhya Pradesh (India 149-Regular) .	4
13.	Public Health Programme, Bombay (India 150-TA) . . .	3
14.	Public Health Programme, Andhra Pradesh (India 151-Regular) .	4
15.	Public Health Programme, Assam (India 152-Regular) . . .	4
16.	Dental Health (India 100-Regular).	1

17.	Vital and Health Statistics, Nagpur (India 90-TA)	1
18.	Nursing Education (Public Health Integration) (India 99-TA) . .	3
19.	Nursing Advisers to States (Madras, Madhya Pradesh and States undesignated) (India 110-TA).	2
20.	Health Education (Ministry of Health in Co-operation with Ministry of Education) (India 85-TA).	1
21.	Health Education States of Bombay, Uttar Pradesh and Bihar (India 108-TA).	3
22.	Health Education, All-India Institute of Hygiene & Public Health, Calcutta (India 118-TA).	1
23.	Paediatric Education (India 114-Regular)	3
24.	Assistance of Upgraded Departments of Paediatrics of the Medical Colleges, Madras (India 134-Regular).	2
25.	Assistance to Upgraded Departments of Paediatrics of the three Medical Colleges, Bombay (India 135-Regular). . . .	3
26.	Assistance to All India Institute of Mental Health, Bangalore (India 71-Regular).	5
27.	Public Health Engineering, University of Madras (India 77-TA) . .	2
28.	Environmental Sanitation, Kerala (India 95-TA)	2
29.	Environmental Sanitation, Uttar Pradesh (India 84-TA) . . .	2
30.	Water Supply and Sewage Disposal, Calcutta (India 170-TA) . .	4
31.	Malaria Eradication, India (India 153-MESA)	8
32.	Training in Preventive and Social Medicine (India 91-TA) . .	2
33.	All India Institute of Hygiene and Public Health, Calcutta, Exchange of Professors (India 137-TA)	1

In the implementation of the programmes in India the assistance given by the W.H.O. during the year under review amounted to U.S. $1,129,870. The Government of India contribution to the W.H.O. during the year amounted to U.S. $407,920 (Rs. 19,82,476). The W.H.O. granted fellowships to the selected candidates for training abroad in various subjects are as detailed below :—

Number of candidates who were awarded fellowships	Subjects	Countries
22	Domiciliary and Midwifery Training, Industrial Hygiene, T. B., Leprosy Control, Preventive and Social Medicine, Medical Entomology, Bacteriology, Paediatrics, Sanitary Engineering, Trachoma Control, Public Health Nursing Administration, Insecticide Resistance, Epidemiology, Epidemiology and Preventive Medicine and Technique of age determination.	U.K., Egypt, U.S.A U.S.S.R.

India also provided facilities to the following foreigners, who were granted fellowships by the W.H.O. in various subjects:—

No. of scholars who were awarded fellowships	Country	Subjects of training
66	Burma, Indonesia, Taiwan (Formosa), Thailand, Maldive Islands, Nepal, U.A.R., U.S.A. Uganda, New Guinea, Tanganyika, Afganisthan, New Zeland, Philippines, Iran, Nigeria, Ceylon, Liberia, Austria, Yugoslavia, Sudan, Japan and Korea.	Radio diagnosis, Bio-chemistry, Malaria Laboratory Techniques, Public Health, Post Health and Quarantine, T. B. Chemotherapy, Malaria Eradication, V. D Control, Medical Education, Trachoma Control, Midwifery, General Nursing Epidemiology, D. M. C. W. Course, Health Education, Filaria Control, Smallpox, Vaccine Lymph Manufacture, General Laboratory Technique, Health Statis ics T.B. Control, Certificate Course in Public Health Nursing, Rural Health Environmental Sanitation and Infectious Diseases.

(ii) UNICEF.

The UNICEF offers assistance in health programmes specially for the benefit of expectant and nursing mothers and children. It is a part of the United Nations and was established by the U.N. General Assembly in December, 1946. It is an international co-operative on behalf of children. The assistance is normally in the form of equipment and supplies to health programmes for expectant and nursing mothers and children. The UNICEF makes allocations of funds against specific projects as negotiated between representatives of the Government of India, the State Governments concerned and UNICEF as presented to the UNICEF Executive Board, which meets twice a year. India was a member of the UNICEF Executive Board during the year under review.

During the year 1959, the UNICEF allocated $5,105,700 for the following programmes which were approved in March and September, 1959 sessions of the UNICEF Executive Board :—

	Amount (in $)
1. Child Nutrition Project, Orissa	165,000
2. Nutrition Education and related activities, Andhra Pradesh	217,000
3. Pre-school and School Feeding programme (34,826,000 pounds skim milk powder).	870,700 (freight).
4. Milk Conservation Programme, Bombay	1,000,000
5. Milk Conservation Programme, Rajkot	150,000
6. Milk Conservation, Bangalore City Dairy	590,000
7. Additional equipment for milk conservation project in the City of Ahmedabad.	167,000
8. Continued assistance to the National Programme for the development of Health Services in relation to Community Development.	1,264,000
9. (a) T.B. Control Programme	330,000
(b) BCG Vaccination Campaign.	279,000
10. D.D.T. Plant, Delhi (Supplementary allocation)	73,000

The UNICEF is financed by contributions from Governments, Voluntary Agencies, individuals and other sources. The Government of India's contributions to the UNICEF for the year 1959 amounted to Rs. 23,00,000 of which Rs. 16,00,000 were contributed by the Ministry of Health and the balance of Rs. 7,00,000 by the Ministry of Food and Agriculture. A grant-in-aid of Rs. 5,00,000 was also given by the Ministry of Health to the UNICEF for the maintenance of the UNICEF local office.

(iii) International Conferences

The following international conferences were held during the year 1959 and the persons deputed by the Government of India to attend these conferences are detailed below :—

The 23rd Session of the W.H.O. Executive Board held in Geneva from 20th January to 3rd February, 1959 was attended by Lt. Col. Jaswant Singh, the then Director General of Health Services.

Shri D. P. Karmarkar, Union Health Minister, Dr. A. L. Mudaliar, Vice-Chancellor of Madras University, Lt. Col. Jaswant Singh, Director General of Health Services, Dr. D. S. Raju, M. P. and Dr. V. Rama Krishna, Assistant Director General of Health Services attended the 12th World Health Assembly held in Geneva from 12th to 30th May, 1959.

The 12th W.H.O. Regional Committee for South East Asia held at Kandy (Ceylon) from 23rd to 29th September, 1959 was attended by Lt. Col. Jaswant Singh, Director General of Health Services, Dr. G. S. Melkote, M.P. and Dr. C. G. Pandit, Director, Indian Council of Medical Research.

Lt. Col. M. L. Ahuja, Medical Adviser to the High Commissioner for India in United Kingdom, London attended the meeting of Executive Board of the UNICEF held in Geneva from 2nd to 10th March, 1959.

Dr. P. V. Benjamin Adviser in T.B. was deputed to attend XV International T.B. Conference held in Istambul from 7th to 18th September, 1959 and the meeting of the T.B. Expert Committee of the W.H.O. held at Geneva from 28th September to 23rd October, 1959.

To attend the meeting of the W.H.O. Study Group on B.C.G. vaccine production held at Manila from 16th to 20th November, 1959; Dr. C. B. D. Silva, Director, BCG Vaccine Laboratory, Guindy, Madras was deputed.

Dr. S. P. Rama Krishnan, Director, Malaria Institute of India, attended the meeting of W.H.O. Scientific Group on Malaria Research held in Geneva from 23rd to 27th November, 1959.

At the meeting of the W.H.O. Scientific Group on Research in non-ophthalmologic aspects of Onchocerciasis and Filarisis held at Geneva from 16th to 21st November, 1959; Dr. N.G.S. Raghavan, Deputy Director, National Filaria Control Programme was nominated as a Government of India's delegate.

Dr. Rajinder Pal, Deputy Director, National Malaria Eradication Programme went to Geneva to attend the meeting of W.H.O. Expert Committee on insecticides held from 14th to 19th September, 1959.

At Mysore a meeting of the F.A.O. Seminar on Food Technology was held from 1st to 8th August, 1959 and Dr. Y. K. Subramaniam, Assistant Director General of Health Services (Public Health) was deputed by the Government of India.

STATISTICAL APPENDIX

(251-361)

Table No. 1

Population as in 1951 *and* 1961 *Census of Registration Areas in different States of India during the year* 1959

States/Union Territories	Years	Rural	Urban	Total	Males	Females	Registration area (in sq. miles)
1	2	3	4	5	6	7	8
1. Andhra Pradesh	1961	29,623,726	6,261,130	35,884,856	18,126,471	17,758,385	102,904
	1951	25,586,677	5,438,454	31,025,131	15,623,415	15,401,716	
2. Assam	1961	10,970,979	889,080	11,860,059	6,318,229	5,541,830	47,089*
	1951	8,420,439	410,293	8,830,732	4,705,615	4,125,117	
3. Bihar	1961	42,541,742	3,915,300	46,457,042	23,328,178	23,128,864	67,113
	1951	36,157,517	2,626,261	38,783,778	19,490,560	19,293,218	
4. Bombay	1961	43,816,275	16,309,302	60,125,577	31,055,529	29,070,048	190,668
	1951	34,615,248	13,649,973	48,265,221	24,821,961	23,443,260	
5. Kerala	1961	14,265,697	2,535,574	16,801,271	8,308,497	8,492,774	14,677
	1951	11,711,928	1,780,076	13,492,004	6,653,007	6,838,997	
6. Madhya Pradesh	1961	27,765,099	4,629,276	32,394,375	16,598,526	15,795,849	171,052
	1951	22,938,700	3,132,937	26,071,637	13,258,004	12,816,633	
7. Madras	1961	24,494,131	8,991,318	33,485,499	16,832,833	16,652,616	50,174
	1951	22,659,540	7,315,396	29,974,936	14,931,767	15,043,169	
8. Mysore	1961	18,359,976	5,187,105	23,547,081	12,021,248	11,525,833	74,861
	1951	14,945,971	4,455,985	19,401,956	9,886,923	9,535,033	
9. Orissa	1961	15,469,915	611,078	16,080,993	8,027,903	8,053,090	49,727
	1951	12,877,487	509,243	13,386,730	6,611,106	6,775,624	

NOTE.—

*Excluding N.E.F.A. and Nagaland.

Table No. 1

Population as in 1951 *and* 1961 *Census of Registration Areas in different States of India during the year* 1959—(concld.)

1	2	3	4	5	6	7	8
10. Punjab	1961	16,219,051	4,079,100	20,298,151	10,866,910	9,431,241	
	1951	13,068,448	3,066,442	16,134,890	8,681,778	7,453,112	47,456
11. Rajasthan	1961	†	2,415,448	2,415,448	1,291,723	1,123,725	
	1951	†	1,889,843	1,889,843	998,985	900,858	†
12. Uttar Pradesh	1961	64,276,796	9,476,118	73,752,914	38,664,463	35,088,451	
	1951	54,590,043	8,625,699	63,215,742	33,098,866	30,116,876	113,423
13. West Bengal	1961	26,872,049	8,064,291	34,936,340	18,582,034	16,354,306	
	1951	20,020,744	6,258,102	26,278,846	14,084,923	12,193,923	34,197
14. Delhi	1961	300,007	2,344,051	2,644,058	1,480,708	1,163,350	
	1951	306,938	1,437,134	1,744,072	986,538	757,534	578
15. Himachal Pradesh	1961	1,285,171	63,811	1,348,982	700,738	648,244	
	1951	1,064,320	45,146	1,109,466	579,503	529,963	10,904
16. Pondicherry	1961	280,094	88,989	369,683	183,445	185,638	
	1951	252,658	64,595	317,253	156,275	160,978	186
17. Manipur	1961	475,672	67,539	543,211	269,541	273,670	
	1951	384,661	2,862	387,523	191,327	196,196	†
18. Andaman and Nicobar Islands	1961	49,339	14,099	63,438	39,259	24,179	
	1951	22,957	8,014	30,971	19,055	11,916	3,215

NOTE .—

†Figures not available.

Table No. 2

Number of Still Births and Sex Ratio in different States of India during the years 1958 *and* 1959

States/Union Territories	Years	Still births			No. of male births per 100 female births		
		Rural	Urban	Total	Rural	Urban	Total
1	2	3	4	5	6	7	8
1. Andhra Pradesh	1958	814	4,123	4,937	106	108	107
	1959	588	3,879	4,467	108	108	108
2. Assam	1958	1,102	252	1,354	103	107	103
	1959	1,582	311	1,893	103	108	103
3. Bihar	1958	†	†	1,068	109	113	109
	1959	4,510	298	4,808	110	114	110
4. Bombay	1958	5,834	12,610	18,441	109	110	109
	1959	8,857	10,886	19,743	109	109	109
5. Kerala	1958	2,291	1,845	4,136	106	106	106
	1959	1,876	2,352	4,228	106	108	106
6. Madhya Pradesh	1958	7,525	758	8,283	106	112	106
	1959	9,849	2,434	12,283	106	117	108
7. Madras	1958	2,342	11,583	13,925	107	106	107
	1959	4,297	11,106	15,403	107	106	107
8. Mysore	1958	8,654	4,959	13,613	106	107	106
	1959	5,175	4,334	9,509	106	108	107

Table No. 2

Number of Still Births and Sex Ratio in different States of India during the years 1958 *and* 1959—(concld.)

1	2	3	4	5	6	7	8
9. Orissa	1958	†	†	†	107	100	107
	1959	9,060	396	9,456	107	109	107
10. Punjab	1958	600	671	1,271	115	112	114
	1959	684	752	1,436	114	115	115
11. Rajasthan	1958	9,612	725	10,337	†	†	†
	1959	†	500	650	†	118	†
12. Uttar Pradesh	1958	1,196	1,518	2,714	123	116	121
	1959	578	1,483	2,061	122	115	120
13. West Bengal	1958	5,587	4,095	9,682	109	108	109
	1959	6,880	3,803	10,683	108	109	108
14. Andaman and Nicobar Islands	1958	†	10	10	97	98	97
	1959	†	16	16	103	95	99
15. Delhi	1958	20	517	537	111	108	109
	1959	8	599	607	114	108	109
16. Himachal Pradesh	1958	52	5	57	113	103	112
	1959	92	29	121	112	115	112
17. Manipur	1958	3	106	109	121	114	119
	1959	†	†	†	†	†	†

NOTE .—

†Figures not available.

Table No. 3

Number of districts affected with Smallpox etc., and the vaccinations performed against Smallpox in different States/Union Territories of India during the year 1959.

States/Union Territories	Years	Total No. of districts	No. of districts affected with smallpox	Cases notified	Deaths notified	No. of deaths per 100 small-pox cases notified	Peak months of incid-ence	Vaccinations performed			Percentage of success	
								Primary	Re-vaccina-tions	Total	Primary	Re-vaccina-tion
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Andhra Pradesh	1959	20	20	8,985	1,862	20·72	January	11,72,360	43,15,297	54,87,657	92·6	17·5
	1958	20	20	25,884	16,180	62·49	February	13,47,371	58,03,053	71,50,424	90·6	15·6
2. Assam . .	1959	11	11	290	62	21·38	March	6,49,373*	18,24,954*	24,74,327*	90·9*	55·5*
	1958	11	11	416	57	13·70	March	3,45,317	9,85,332	13,30,649	87·5	53·9
3. Bihar . .	1959	17	17	1,415@	396@	28·00	April	17,86,003	86,33,740	1,04,19,743	+	+
	1958	17	17	10,046@	2,819@	28·06	April	18,20,271	1,18,15,590	1,36,35,861	+	+
4. Bombay . .	1959	43	40	8,897	4,141	46·54	March	14,17,377	1,13,83,721	1,28,01,098	+	+
	1958	43	43	60,450	28,262	46·75	March	11,57,055	71,32,415	82,89,470	98·9	+
5. Jammu and Kashmir.	1959	9	+	+	+	+	+	+	+	+	+	+
	1958	9	+	+	+	+	+	+	+	+	+	+
6. Kerala . .	1959	9	9	6,090	2,389	39·23	March	7,33,530	32,60,272	39,93,802	94·2	61·5
	1958	9	9	3,938	1,514	38·45	December	6,88,549	34,70,907	41,59,456	77·3	44·4
7. Madhya Pradesh	1959	38	38	4,158	723	17·39	February	3,65,382	5,31,972	8,97,354	76·4	41·5
	1958	38	34	13,275	2,416	18·20	May	7,79,264	12,02,677	19,81,941	72·2	38·1
8. Madras . .	1959	13	13	6,699	2,225	33·21	+	11,36,661	51,09,866	62,46,527	90·0	14·8
	1958	13	13	14,841	5,498	37·05	+	11,79,871	57,05,180	68,85,051	92·1	16·8
9. Mysore . .	1959	19	19	+	3,593	+	+	6,06,239	29,38,452	35,44,691	95·9	26·0
	1958	19	19	+	6,169	+	+	7,92,389	33,32,926	41,25,315	96·2	28·6
10. Orissa . .	1959	13	13	8,326@	2,143@	25·74	April	7,36,568	27,88,402	35,24,970	89·3	39·3
	1958	13	13	23,280@	6,000@	25·77	February	8,06,351	28,39,702	36,46,053	91·0	34·5

Table No. 3

No. of districts affected with Smallpox etc., and the vaccinations performed against Smallpox in different States/Union Territories of India during the year 1959—(concld.)

1	2	3	4	5	6	7	8	9	10	11	12	13
11. Punjab . .	1959	18	17	529	116	21·93	+	7,07,981	21,40,394	28,48,375	98·6	47·5
	1958	18	18	2,382	362	15·20	May	7,27,300	32,58,237	39,85,537	98·5	48·6
12. Rajasthan . .	1959	26	25	2,581	828	32·08	April	3,82,215	3,53,533	7,35,748	60·0	23·0
	1958	26	25	7,487	2,202	29·41	April	5,68,813	7,03,624	12,72,437	64·6	27·9
13. Uttar Pradesh .	1959	52	49	3 649@	1,287@	35·27	April	19,46,832	22,31,969	41,78,801	98·1	89·6
	1958	52	51	15,099@	5,756@	38·12	April	21,15,238	40,56,688	61,71,926	97·6	90·5
14. West Bengal .	1959	16	16	5,405@	2,060@	38·11	April	12,73,914	1,05,06,606	1,17,80,520	89·4	34·9
	1958	16	16	27,231@	11,215@	41·18	April	15,66,784	1,15,30,843	1,30,97,627	86·3	35·9
15. Andaman and	1959	1	—	—	—	—	—	1,259	1,770	3,029	43·6	83·0
Nicobar Islands.	1958	1	—	—	—	—	—	3,429	7,169	10,598	78·0	72·0
16. Delhi . .	1959	1	1	411@	80@	19·46	May	98,244	10,90,487	11,88,731	90·2	45·1
	1958	1	1	356@	137@	38·48	April	95,898	10,00,383	10,96,281	88·2	31·5
17. Himachal Pradesh	1959	5	4	25@	2@	8·00	April	32,029	1,95,246	2,27,275	91·5	71·0
	1958	5	4	116	21	18·10	+	45,589	2,65,180	3,10,769	91·4	72·9
18. Laccadive, Islands	1959	1	—	—	—	—	—	+	+	+	+	+
	1958	1	—	—	—	—	—	+	+	+	+	+
19. Manipur . .	1959	1	—	—	—	—	—	32,304	60,362	92,666	75·1	53·0
	1958	1	1	37	15	40·54	April	37,729	62,757	1,00,486	85·7	69·3
20. Pondicherry .	1959	4	2	445	257	57·75	January	11,697	92,994	1,04,691	89·3	34·6
	1958	4	3	415	176	42·41	March	9,686	39,191	48,877	70·6	39·8
21. Tripura . .	1959	1	—	—	—	—	—	66,282	3,26,493	3,92,775	86·8	55·1
	1958	1	1	242	60	24·79	March	75,253	3,79,332	4,54,585	83·8	53·0
TOTAL	1959	318	294	57,905	22,164	38·28	April	1,31,56,250	5,77,86,530	7,09,42,780	85·5	46·6
	1958	318	299	2,05,495	88,859	43·24	April	1,41,62,157	6,35,91,186	7,77,53,343	86·1	45·5

NOTE:—

@Provisional information and is subject to revision.
*Excluding figures in respect of two districts in the State.
+Information not available.
—Nil information.

Table No. 4

Number of deaths due to Plague, death rates per mille of population etc., in India during the years 1950-1959.

Years	Deaths Due to plague	Death Rates per mille of population	Anti-plague inoculations performed
1950	17,435	0·060	2,863,232
1951	13,679	0·040	+
1952	3,894	0·010	165,411
1953	1,451	0·010	323,254
1954	704	0·002	338,593
1955	178	0·001	273,584
1956	195	0·001	43,419
1957	167	0·000	22,673
1958	247	0·001	64,628
1959	192	0·001	15,227

NOTE.—
+ Information not available.

Table No. 5

Cholera death rates in different States/ of India during the years 1959 *and* 1958

States/Union Territories	Years	Percentages of cholera deaths to total deaths	Death rates per million of population
(1)	(2)	(3)	(4)
1. Andhra Pradesh	1959	0·30	20
	1958	2·37	250
2. Assam	1959	0·07	3
	1958	0·13	6
3. Bihar	1959	1·10	60
	1958	0·81	63
4. Bombay	1959	0·06	10
	1958	0·86	110
5. Jammu and Kashmir	1959	+	+
	1958	+	+
6. Kerala	1959	—	—
	1958	0·002	2
7. Madhya Pradesh	1959	0·25	20
	1958	1·21	140
8. Madras	1959	0·05	10
	1958	0·54	69
9. Mysore	1959	0·10	20
	1958	1·21	126
10. Orissa	1959	0·35	50
	1958	3·04	560
11. Punjab	1959	—	—
	1958	0·004	0·53
12. Rajasthan	1959	0·20	17
	1958	0·04	17
13. Uttar Pradesh	1959	0·10	9
	1958	1·02	198
14. West Bengal	1959	0·70	50
	1958	1·96	183
15. Andaman and Nicobar Islands	1959	—	—
	1958	0·24	—
16. Delhi	1959	—	—
	1958	0·12	9
17. Himachal Pradesh	1959	—	—
	1958	—	—
18. Laccadive Islands	1959	—	—
	1958	—	—
19. Manipur	1959	—	—
	1958	—	—
20. Pondicherry	1959	0·03	6
	1958	+	+
21. Tripura	1959	0·02	7
	1958	0·66	3
TOTAL	1959	0·18	16
	1958	1·12	128

NOTE.—
+ Information not available.
— Nil information.

Table No. 6

Number of districts affected with cholera etc., in various States/Union Territories of India during the years 1959 *and* 1958

States/Union Territories	Years	Total No. of Districts	No. of Distts. affected with cholera	No. of villages affected with cholera	Cases notified	Deaths notified	No. of deaths per 100 cholera cases notified	Peak months of incidence	Anti-cholera inoculations performed
1	2	3	4	5	6	7	8	9	10
1. Andhra Pradesh	1959	20	11	183	1,683	784	46·58	January	11,05,290
	1958	20	20	2,027	15,633	8,101	51·82	August	45,27,304
2. Assam	1959	11	2	62	41	31	75·61	January	13,77,026
	1958	11	3	82	240	52	21·67	September	8,05,602
3. Bihar	1959	17	10	1,052	4,965	2,315	46·63	October	1,56,60,590
	1958	17	17	720	7,266	2,581	35·52	September	1,44,60,311
4. Bombay	1959	43	34	345	1,839	454	24·70	August	22,38,720
	1958	43	34	1,982	20,170	7,374	36·56	September	50,00,000
5. Jammu and Kashmir	1959	9	+	+	+	+	+	+	+
	1958	9	+	+	+	+	+	+	+
6. Kerala	1959	9	—	—	—	—	—	—	9,386
	1958	9	2	+	103	27	26·21	February	1,70,279
7. Madhya Pradesh	1959	38	15	355	2,160	632	29·26	August	7,70,950
	1958	38	17	3,135	8,088	3,896	48·17	July	40,77,497
8. Madras	1959	13	4	68	424	206	48·58	January	4,95,013
	1958	13	12	1,195	6,786	2,312	34·07	January	24,53,260
9. Mysore	1959	19	5	58	+	261	+	December	3,14,107
	1958	19	11	1,232	5,694	2,743	48·17	June	15,93,070
10. Orissa	1959	13	10	100	+	754	+	June	14,05,188
	1958	13	13	1,189	+	7,795	+	August	15,13,026

Table No. 6

Number of districts affected with cholera etc., in various States/Union Territories of India during the years 1959 *and* 1958—(concld.)

1	2	3	4	5	6	7	8	9	10
11. Punjab	1959	18	—	—	—	—	—	—	1,26,853
	1958	18	3	3	33	9	38·46	August	3,81,208
12. Rajasthan	1959	26	2	+	142	39	27·46	October	1,83,234
	1958	26	2	102	69	33	47·83	September	75,634
13. Uttar Pradesh	1959	52	4	+	+	645	+	April	15,38,700
	1958	52	19	1,269	+	6,751	+	October	58,12,748
14. West Bengal	1959	16	12	+	4,156	162	3·90	July	57,97,553
	1958	16	14	755	12,426	5,295	42·61	April	70,35,587
15. Andaman and Nicobar Islands	1959	1	—	—	—	—	—	—	1,080
	1958	1	—	—	—	—	—	—	2,292
16. Delhi	1959	1	—	—	—	—	—	—	6,65,193
	1958	1	1	9	264	25	9·47	August	11,50,255
17. Himachal Pradesh	1959	5	—	—	—	—	—	—	4,955
	1958	5	1	+	1	1	100·00	April	4,918
18. Laccadive Islands.	1959	1	—	—	—	—	—	—	+
	1958	1	—	—	—	—	—	—	+
19. Manipur	1959	1	1	+	3	—	—	—	72,821
	1958	1	1	—	—	—	—	June	47,571
20. Pondicherry	1959	4	+	+	5	2	40·00	—	7,450
	1958	4	+	21	96	34	35·42	—	18,020
21. Tripura	1959	1	1	7	15	5	33·33	+	76,938
	1958	1	1	10	10	3	30·00	+	67,400
TOTAL	1959	318	111	2,230	15,433	6,290	40·76	January	3,18,51,047
	1958	318	171	13,731	76,879	47,032	61·18	September	4,91,95,982

NOTE.—

+ Information not available.
— Nil information.

Table No. 7

Number of Malaria Eradication Units functioning in various States/Union Territories of India during the year 1959

States/Union Territories	No. of endemic units	No. of hypo (-) endemic units	Total
1. Andhra Pradesh	9·00	24·50	33·50
2. Assam	13·25	—	13·25
3. Bihar	20·00	22·00	42·00
4. Bombay	35·50	17·00	52·50
5. Jammu and Kashmir	1·00	—	1·00
6. Kerala	3·50	9·00	12·50
7. Madhya Pradesh	25·50	3·50	29·00
8. Madras	3·70	27·75	31·45
9. Mysore	14·63	4·50	19·13
10. Orissa	10·50	4·00	14·50
11. Punjab	11·00	7·00	18·00
12. Rajasthan	9·67	7·00	16·67
13. Uttar Pradesh	40·00	27·00	67·00
14. West Bengal	23·00	3·00	26·00
15. Andaman and Nicobar Islands	—	—	—
16. Delhi	2·00	—	2·00
17. Laccadive, Minicoy and Amindive Islands	—	—	—
18. Himachal Pradesh	1·25	—	1·25
19. Manipur	2·00	—	2·00
20. N.E.F.A.	1·00	0·50	1·50
21. Naga Hills	1·00	—	1·00
22. Pondicherry	—	—	—
23. Tripura	1·00	—	1·00
24. Coal fields	1·00	—	1·00
25. Sikkim	0·50	—	0·50
TOTAL	230·00	156·75	386·75

NOTE.—
—Nil information.

Table No. 8

Epidemiological indices in the various States Union Territories of India during the year 1959.

States/Union Territories	No. of Units	Child Spleen Survey		Child Parasite Survey		Infant Parasite Survey		Child Spleen Rates	Child Parasite Rates	Infant Parasite Rates
		No. Examined	Percentage of target	No. Examined	Percentage of target	No. Examined	Percentage of target			
1	2	3	4	5	6	7	8	9	10	11
1. Andhra Pradesh . .	33·50	5,58,900	83·4	1,51,562	45·2	22,011	65·7	2·1	0·14	0·45
2. Assam	13·25	1,01,597	38·3	60,146	45·4	11,204	84·6	8·0	2·33	1·02
3. Bihar	42·00	5,95,866	70·9	2,46,593	58·7	36,590	87·1	1·2	0·05	0·00
4. Bombay	52·50	8,32,189	79·3	2,58,288	49·2	37,674	71·7	0·6	0·05	0·02
5. Jammu and Kashmir . .	1·00	13,603	68·0	869	8·7	2,255	225·5	1·5	0·00	0·00
6. Kerala	12·50	82,731	33·1	2,890	2·3	536	4·3	0·2	0·00	0·00
7. Madhya Pradesh . .	29·00	2,85,793	49·3	1,16,162	40·0	15,047	51·9	3·5	0·29	0·72
8. Madras	31·45	9,34,029	148·5	3,42,339	108·8	53,406	169·8	0·2	0·02	0·00
9. Mysore	19·13	2,55,992	66·9	1,42,408	74·5	21,070	110·1	0·4	0·07	0·03
10. Orissa	14·50	2,10,883	72·7	24,956	17·2	3,299	22·8	8·0	1·62	0·88
11. Punjab	18·00	2,84,918	79·1	1,40,064	77·8	17,957	99·8	0·5	0·16	0·01
12. Rajasthan	16·67	2,55,694	75·2	1,06,138	63·7	8,542	51·2	2·8	0·23	0·01
13. Uttar Pradesh . . .	67·00	13,34,943	99·6	5,90,003	88·1	65,755	98·1	1·4	0·10	0·09
14. West Bengal . . .	26·00	4,60,382	88·5	81,755	31·4	10,286	39·6	0·4	0·03	0·00

Table No. 8

Epidemiological indices in various States/Union Territories of India during the year 1959—(Concld.)

1	2	3	4	5	6	7	8	9	10	11
15. Delhi	2·00	63,880	159·7	18,941	94·7	2,974	148·7	0·1	0·02	0·00
16. Himachal Pradesh . .	1·25	18,734	74·9	4,979	39·8	1,669	133·5	0·2	0·00	0·00
17. Manipur	2·00	16,427	41·1	15,751	78·8	6,308	315·4	1·7	0·01	0·02
18. Naga Hills	1·00	—	—	—	—	—	—	+	+	+
19. N.E.F.A.	1·50	8,398	83·9	1,502	30·0	610	122·0	9·5	5·65	2·45
20. Tripura	1·00	5,056	25·3	4,564	45·6	818	81·8	2·5	0·00	0·24
21. Coalfields	1·00	23,190	116·0	8,219	82·2	1,386	138·6	0·6	0·02	0·00
22. Sikkim	0·50	454	4·5	—	—	—	—	5·7	+	+
TOTAL .	386·75	6,343,669	82·0	2,318,149	59·9	319,397	82·6	1·4	0·16	0·14

NOTE.— +Information not available.
—Nil information.

Table No. 9

Dispensary statistics and examination of blood smears from clinical malaria cases in various States of India during the year 1959.

States/Union Territories	All cases	Clinical Malaria cases		Blood smears examined from clinical cases	
		Total number	Percentages of all cases	Number examined	Percentages of parasite positive
1. Andhra Pradesh	2,795,493	138,166	4·9	2,810	2·6
2. Assam	841,377	91,465	10·9	128	19·5
3. Bihar	2,241,272	84,085	3·8	2,346	0·2
4. Bombay	9,478,931	280,110	2·9	5,816	3·2
5. Jammu and Kashmir	132,959	3,904	1·9	88	0·0
6. Kerala	6,555,998	4,739	0·1	104	1·0
7. Madhya Pradesh	4,927,434	234,352	4·8	4,940	1·3
8. Madras	9,139,004	116,011	1·3	4,764	1·0
9. Mysore	10,766,501	102,006	0·9	11,522	3·4
10. Orissa	1,460,137	77,088	5·3	511	0·0
11. Punjab	5,997,608	125,912	2·1	818	1·1
12. Rajasthan	5,876,497	327,554	5·6	10,513	0·4
13. Uttar Pradesh	8,794,294	287,035	3·3	3,664	7·3
14. West Bengal	5,192,447	83,752	1·6	834	0·0
15. Delhi	1,342,693	1,297	0·1	1,160	2·6
16. Himachal Pradesh	1,488,189	9,607	0·6	906	0·0
17. Manipur	218,915	3,652	1·7	331	2·1
18. Naga Hills	+	+	+	+	+
19. N.E.F.A.	119,307	4,310	3·6	2,078	26·1
20. Tripura	217,378	6,151	2·8	190	3·2
21. Coalfields	1,245,946	9,243	0·7	9,190	1·1
22. Sikkim	116,545	1,745	1·5	+	+
23. Railways	5,217,092	64,318	1·2	19,531	4·9
24. Tea Estates	1,099,426	21,668	2·0	21,688	7·0
TOTAL	85,265,443	2,078,170	2·4	103,912	4·1

NOTE.— + Information not available.

Table No. 10

Percentages of deaths due to Dysentery and Diarrhoea and Death Rates per mille of population in different States of India during the years 1958 *and* 1959.

States/Union Territories	Percentages of deaths due to Dysentery and Darrhoea to total deaths		Death Rates per mille of mid-year estimated population	
	1959	1958	1959	1958
1. Andhra Pradesh	5·28	5·20	0·40	0·54
2. Assam	8·90	8·70	0·35	0·37
3. Bihar	1·30	+	0·06	0·05
4. Bombay	4·80	4·70	0·60	0·75
5. Jammu and Kashmir	+	+	+	+
6. Kerala	6·30	6·10	0·50	0·45
7. Madhya Pradesh	5·10	4·60	0·40	0·54
8. Madras	7·30	8·00	0·90	1·05
9. Mysore	7·10	6·80	1·00	0·71
10. Orissa	5·60	+	0·80	0·99
11. Punjab	3·30	3·00	0·30	0·42
12. Rajasthan	5·70	+	0·40	+
13. Uttar Pradesh	4·30	4·40	0·30	0·44
14. West Bengal	3·60	+	0·30	0·53
15. Andaman and Nicobar Islands	10·90	+	0·67	+
16. Delhi	5·50	7·40	0·47	0·65
17. Himachal Pradesh	12·50	+	0·92	0·87
18. Manipur	2·60	7·70	0·06	0·13
19. Pondicherry	11·90	13·30	2·41	+
20. Tripura	+	10·90	+	+
21. Laccadive Islands	+	+	+	+
TOTAL	5·00	5·50	0·46	0·56

NOTE.— + Information not available.

Table No. 11

Percentages of deaths due to Respiratory Diseases to total deaths in various States of India during the year 1959.

States/Union Territories	Deaths due to respiratory diseases	Percentage of respiratory deaths to total deaths from all causes
1. Andhra Pradesh	17,482	6·70
2. Assam	3,355	8·35
3. Bihar	3,180	1·47
4. Bombay	106,236	14·11
5. Jammu and Kashmir	+	+
6. Kerala	13,187	10·91
7. Madhya Pradesh	18,164	6·91
8. Madras	40,856	10·32
9. Mysore	19,974	9·88
10. Orissa	6,168	2·89
11. Punjab	30,434	14·03
12. Rajasthan	2,882	16·65
13. Uttar Pradesh	53,796	9·82
14. West Bengal	+	+
15. Andaman and Nicobar Islands	33	9·19
16. Delhi	4,637	21·69
17. Himachal Pradesh	667	6·89
18. Laccadive, Minicoy and Amindive Islands	+	+
19. Manipur	133	10·26
20. Pondicherry	1,248	17·00
21. Tripura	+	+
TOTAL	332,432	9·09

NOTE.— + Information not available.

Table No. 12

Diseases that were notifiable in various States/Union Territories of India during the year 1959.

States/Union Territories	Diseases Notifiable
1. Andhra Pradesh . . .	1. Acute Influenzal Pneumonia; 2. Anthrax; 3. Cerebrospinal Fever; 4. Chicken-pox; 5. Cholera; 6. Diphtheria; 7. Enteric fever; 8. Leprosy; 9. Measles; 10. Plague; 11. Rabies; 12. Relapsing fever; 13. Scarlet fever; 14. Smallpox; 15. Tuberculosis; 16. Typhus; and 17. Virus-Encephalitis.
2. Assam	1. Tuberculosis; 2. Diphtheria; 3. Enteric Group of Fever; 4. Cerebrospinal Meningitis; 5. Yellow Fever; 6. Infantile paralysis; 7. Meningococcal Meningitis; 8. Cholera; 9. Plague; 10. Small-pox; 11. Kala-azar; 12. Leprosy; 13. Typhus. 14. Whooping Cough; 15. Measles; 16. Mumps; and 17. Chicken-pox.
3. Bihar	1. Cholera; 2. Smallpox; 3. Tuberculosis; and 4. Plague.

During epidemic the diseases *viz.*, Influenza, Infectious Hepatitis and Encephalitis are also declared notifiable in the State.

Table No. 12

Diseases that were notifiable in various States/Union Territories of India during the year 1959—(Contd.)

States/Union Territories	Diseases Notifiable
4. Bombay	*In Municipalities:* 1. Plauge; 2. Smallpox; 3. Cholera; 4. Enteric fever; 5. Scarlet fever; 6. Diphtheria; 7. Typhus; 8. Relapsing fever; 9. Leprosy; 10. Influenzal Pneumonia; 11. Cerebrospinal fever; 12. Yellow fever; 13. Encephalitis; 14. Jaundice and Tuberculosis is notifiable in the Municipalities of Bombay, Ahmedabad and Poona Corporations. *In Rural areas :* 1. Cholera; 2. Smallpox; 3. Plague; 4. Influenza (Influenzal Pneumonia); 5. Yellow fever; 6. Encephalitis; and 7. Jaundice.
5. Delhi	1. Cholera; 2. Smallpox; 3. Plauge; 4. Infectious Hepatitis; 5. Virus-encephalitis; 6. Poliomyelitis; 7. Influenza; 8. Diphtheria; 9. Chicken-pox; 10. Measles; 11. Whooping Cough; 12. Mumps; 13. Cerebrospinal fever; 14. Dysentery (Amoebic and Bacillary); 15. Tuberculosis (all kinds); 16. Enteric fever; 17. Typhus; 18. Scarlet fever; 19. Puerperal fever; 20. Leprosy; 21. Relapsing fever; and 22. Erysipelas.

Table No. 12

Diseases that were notifiable in various States/Union Territories of India during the year 1959—(Contd.)

States/Union Territories	Diseases Notifiable
6. Himachal Pradesh . .	1. Smallpox; 2. Cholera; and 3. Plague.
7. Kerala	*Travancore-Cochin area:* 1. Anthrax; 2. Cholera; 3. Enteric fever; 4. Measles; 5. Rabies; 6. Smallpox; 7. Whooping Cough; 8. Chicken-pox; 9. Diphtheria; 10. Malaria; 11. Mumps; 12. Plague; and 13. Tuberculosis. *Malabar area:* 1. Cerebrospinal fever; 2. Cholera; 3. Measles; 4. Rabies; 5. Smallpox; 6. Chicken-pox; 7. Diphtheria; 8. Plague; 9. Scarlet fever; and 10. Typhus.
8. Madhya Pradesh . .	1. Anthrax; 2. Cerebrospinal Meningitis; 3. Chicken-pox; 4. Cholera; 5. Diphtheria; 6. Dysentery (Bacillary and Amoebic); 7. Encephalitis Lethargica; 8. Epidemic Pneumonia; 9. Acute poliomyelitis; 10. Enteric group of fevers *viz.*, Typhoid, Paratyphoid A. B. C. fevers; 11. Influenza; 12. Leprosy; 13. Measles; 14. Mumps; 15. Plague;

Table No. 12

Diseases that were notifiable in various States/Union Territories of India during the year 1959—(Contd.)

States/Union Territories	Diseases Notifiable
8. Madhya Pradesh—(*Contd.*)	
	16. Puerperal fever; 17. Relapsing fever; 18. Scarlet fever; 19. Smallpox; 20. Tuberculosis of lung; 21. Typhus; and 22. Whooping Cough.
9. Madras	1. Cerebrospinal fever; 2. Chicken-pox; 3. Cholera; 4. Diphtheria; 5. Leprosy; 6. Measles; 7. Plague; 8. Rabies; 9. Scarlet fever; 10. Smallpox; 11. Typhus; 12. Yellow fever; 13. Enteric fever; 14. Poliomyelitis; 15. Infectious Hepatitis; 16. Virus Encephalitis; 17. Whooping Cough; and 18. Tuberculosis.
10. Manipur	1. Cholera; 2. Smallpox; and 3. Plague.
11. Mysore	1. Cerebrospinal fever; 2. Chicken-pox; 3. Cholera; 4. Diphtheria; 5. Leprosy; 6. Measles; 7. Plague; 8. Rabies; 9. Scarlet fever; 10. Smallpox; 11. Typhus; 12. Influenza; 13. Encephalitis; and 14. Kyasanur Forest Disease.

Table No. 12

Diseases that were notifiable in various States/Union Territories of India during the year 1959—(Contd.)

States/Union Territories	Diseases Notifiable
12. Orissa	There is no legal provision, at present, declaring any communicable disease as notifiable in the State, except in non-Panchayat rural areas of Ganjam plains; where only Smallpox is notifiable. Cholera and Smallpox are made notifiable under the Epidemic Diseases Act, 1897 as and when necessary.
13. Punjab	*Urban areas:* 1. Cholera; 2. Plague; 3. Smallpox; 4. Typhus fever(louse-borne); 5. Relapsing fever (louse-borne); 6. Yellow fever; 7. Chicken-pox; 8. Cerebrospinal Meningitis; 9. Diphtheria; 10. Dysentery (Amoebic and Bacillary); 11. Diarrhoea of the new born (epidemic); 12. Erysipelas; 13. Food poisoning (Infectious); 14. Gonococcal infections; 15. Influenza; 16. Leprosy; 17. Measles; 18. Infectious parotitis (Mumps); 19. Puerperal fever; 20. Acute poliomyelitis (Infantile paralysis); 21. Typhoid fever; 22. Para-typhoid fever; 23. Tuberculosis (include Tuberculosis of lung); 24. Whooping Cough; 25. Syphilis; and 26. Virus Encephalitis. *Rural Areas:* 1. Cholera; 2. Smallpox; and 3. Plauge.
14. Rajasthan	Information not available.

Table No. 12

Diseases that were notifiable in various States/Union Territories of India during the year 1959—(Contd.)

States/Union Territories	Diseases Notifiable
15. Tripura	No disease is notifiable in this Territory.
16. Uttar Pradesh . . .	1. Cholera; 2. Smallpox; 3. Plague; 4. Scarlet fever; 5. Diphtheria; 6. Measles; 7. Enteric fever; 8. Yellow fever; 9. Cerebrospinal fever; 10. Typhus; 11. Relapsing fever; 12. Pulmonary Tuberculosis; and 13. Acute Poliomyelitis.
17. West Bengal. . . .	1. Anthrax; 2. Chicken-pox; 3. Dysentery (both bacillary and amoebic); 4. Measles; 5. Relapsing fever; 6. Tuberculosis (of all forms); 7. Typhus fever; 8. Whooping Cough; 9. Yellow fever; 10. Influenzal Pneumonia; 11. Leprosy; 12. Epidemic dropsy; 13. Diphtheria; 14. Typhoid; 15. Para-typhoid A; 16. Para-Typhoid-B; 17. Cholera; 18. Plague; 19. Smallpox; 20. Cerebrospinal Meningitis; 21. Syphilis; 22. Dengue; 23. Malaria; 24. Elephantiasis; 25. Influenza; 26. Encephalitis; 27. Poliomyelitis; 28. Enteric Group of fevers; and 29. Mumps (in Darjeeling district only).

Table No. 12

Diseases that were notifiable in various States/Union Territories of India during the year 1959—(Concld.)

States/Union Territories	Diseases Notifiable
18. Andaman and Nicobar Islands	Infectious diseases such as Cholera, Smallpox and Diphtheria in case of incidences are made notifiable by the Chief Commissioner and Poliomyelitis is made notifiable at the time of epidemic.
19. Pondicherry . . .	1. Ameobic Dysentery; 2. Enteritis; 3. Smallpox; 4. Chicken-pox; 5. Influenza; and 6. Avitaminosis.

Table No. 13

Number of Syphilis and Gonorrhoea patients treated in different classes of Hospitals and Dispensaries in various States of India during the year 1959.

States/Union Territories	Syphilis		Gonorrhoea	
	Out-patient treated	In-patient treated	Out-patient treated	In-patient treated
1. Andhra Pradesh	+	+	+	+
2. Assam	+	+	+	+
3. Bihar	+	+	+	+
4. Bombay	71,049	3,297	55,567	734
5. Jammu and Kashmir	+	+	+	+
6. Kerala	24,957	1,292	25,864	1,251
7. Madhya Pradesh	10,843	1,256	9,279	273
8. Mysore	35,517	2,001	45,087	1,312
9. Madras	106,544	4,888	95,900	1,643
10. Orissa	18,818	1,388	16,920	525
11. Punjab	3,917*	@	3,055*	@
12. Rajasthan	10,952	444	6,397	177
13. Uttar Pradesh	44,228	1,399	30,580	878
14. West Bengal	9,466	260	8,809	144
15. Andaman and Nicobar Islands	46	18	29	8
16. Delhi	+	+	+	+
17. Himachal Pradesh	6,205*	@	2,428*	@
18. Manipur	208	8	432	10
19. Tripura	205*	@	383*	@
TOTAL	3,42,955	16,251	3,00,730	6,955

NOTE.—*Combined figures for in-patients and out-patients treated.
@Separate information for in-patients treated is not available.
+ Information not available.

Table No. 14

Statistics of patients treated at the V.D. Clinics opened under the Second Five Year Plan period during the year 1959.

States/Union Territories	No. of V. D. Clinics opened during the Second Five Year Plan upto the end of 1959	SYPHILIS																	
		Primary			Secondary			Latent			Benign Late			Cardio Vascular			Neuro		
		Males	Females	Children	Males	Females	Children	Males	Females	Children	Males	Females	Children	Males	Females	Children	Males	Females	Children
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Andhra Pradesh	13	3,092	905	12	1,060	401	6	1,542	1,035	8	212	109	4	32	9	1	114	33	2
2. Assam . .	1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
3. Bihar† . .	8	269	86	5	267	185	15	303	212	1	47	22	—	2	—	—	24	2	6
4. Kerala . .	2	287	2	—	83	39	—	32	58	3	4	3	—	1	5	—	—	1	—
5. Madras . .	10	1,650	403	2	489	276	20	546	449	—	113	49	—	53	4	—	43	15	1
6. Mysore . .	3	218	34	—	166	127	1	54	11	—	9	5	—	2	—	—	1	—	—
7. Punjab . .	1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
8. Uttar Pradesh .	2	932	186	58	144	55	14	31	3	—	—	—	—	—	—	—	20	—	3

Table No. 14

Statistics of patients treated at the V. D. Clinics opened under the Second Five Year Plan period during the year 1959—(Contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
9. West Bengal .	2	35	—	—	17	10	—	5	11	—	14	10	—	—	—	—	2	—	—
10. Himachal Pradesh	9	55	39	—	89	63	1	891	686	2	17	14	—	5	7	—	21	13	—
11. Tripura . .	1	20	10	4	13	11	10	4	3	—	2	—	—	—	—	—	—	—	—
12. Andaman and Nicobar Islands.	1	—	—	—	—	—	—	—	12	—	—	—	—	—	—	—	—	—	—
TOTAL .	53	6,558	1,665	81	2,328	1,167	67	3,408	2,480	14	418	212	4	95	25	1	225	64	12

NOTE.— + Information not available.
— Nil information.
† Information relates to 5 clinics only.

Table No. 14

Statistics of patients treated at the V. D. Clinics opened under the Second Five Year Plan period during the year 1959—(Concld.)

States/Union Territories	SYPHILIS																	
	Congenital Syphilis			Gonorrhoea			Chancroid			Lymphogronuloma Venereum			Granuloma Inguinals			Grand Total		
	Males	Females	Children	Males	Females	Children	Males	Females	Children	Males	Females	Children	Males	Females	Children	Males	Females	Children
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
1. Andhra Pradesh	33	35	125	5,593	2,476	60	4,504	322	8	1,334	220	2	385	150	—	17,961	5,695	228
2. Assam . .	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
3. Bihar* . .	34	17	79	357	12	1	55	—	—	9	9	—	6	—	1	1,373	545	108
4. Kerala . .	2	2	3	232	30	1	40	—	—	1	2	—	—	2	4	1,322	937	64
5. Madras . .	10	20	97	2,092	1,113	11	1,354	114	1	983	134	1	176	55	—	7,509	2,632	133
6. Mysore . .	17	7	—	403	107	2	188	41	2	49	11	—	21	1	—	1,128	344	5
7. Punjab . .	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
8. Uttar Pradesh .	37	1	10	512	55	5	—	—	—	4	—	—	18	—	—	1,698	300	90
9. West Bengal .	13	5	10	75	20	—	27	12	—	—	—	1	1	—	—	189	68	11
10. Himachal Pradesh	8	14	54	230	95	7	3	—	—	1	2	—	—	2	4	1,322	937	64
11. Tripura . .	1	1	5	16	2	1	3	—	—	—	—	—	—	—	—	59	27	20
12. Andaman and Nicobar Islands.	—	—	—	3	18	—	—	—	—	—	—	—	—	—	—	3	30	—
TOTAL .	155	102	383	9,513	3,928	88	6,234	489	11	2,425	376	4	682	211	9	32,041	10,719	666

NOTE.— +Information not available.
—Nil information.
*Information relates to 5 clinics only.

Table No. 15

National Water Supply and Sanitation Schemes in various States of India during the year 1959.

States/Union Territories	Urban		Rural	
	No. of schemes sanctioned	Estimated cost (Rs. in lakhs)	No. of schemes sanctioned	Estimated cost (Rs. in lakhs)
1. Andhra Pradesh	—	—	—	—
2. Assam	1	48·750	—	—
3. Bihar	—	—	1	6·225
4. Bombay	—	—	2	0·240
5. Jammu and Kashmir	1	3·220	1	1·190
6. Kerala	—	—	7	1·950
7. Madhya Pradesh	14	213·850	—	—
8. Madras	—	—	—	—
9. Mysore	—	—	—	—
10. Orissa	1	28·105	—	—
11. Punjab	1	3·480	6	20·150
12. Rajasthan	—	—	3	57·880
13. Uttar Pradesh	30	199·330	9	95·470
14. West Bengal	13	184·520	—	—
1. Andaman and Nicobar Islands	—	—	—	—
2. Delhi	—	—	—	—
3. Himachal Pradesh	—	—	—	—
4. Laccadive, Minicoy and Amindive Islands	—	—	—	—
5. Manipur	—	—	—	—
6. Pondicherry	—	—	—	—
7. Tripura	—	—	—	—
TOTAL	61	681·245	29	183·105

NOTE. — — Nil information.

Table No. 16

Protected Water Supply in various States of India during the year 1959.

States/Union Territories	No. of towns in the State	Corresponding population†	No. of towns having adequate protected water supply	Corresponding population†	Percentage of population having protected water supply to urban population	No. of towns having inadequate protected water supply	Corresponding population†	Percentage of population having inadequate protected water supply to urban population	No. of towns having no protected water supply	Corresponding population†	Percentage of population having no protected water supply to urban population
1	2	3	4	5	6	7	8	9	10	11	12
1. Andhra Pradesh	52	32,33,837	10	14,04,218	43·42	22	13,44,141	41·56	20	4,85,478	15·01
2. Assam . .	29	7,12,000	3	50,000	7·02	8	3,92,000	55·06	18	2,70,000	37·92
3. Bihar . .	101	25,60,829	9	7,72,936	30·18	12	7,55,888	29·52	80	10,32,005	40·29
4. Bombay .	+	+	+	+	+	+	+	+	+	+	+
5. Jammu and Kashmir.	+	+	+	+	+	+	+	+	+	♣	
6. Kerala . .	29	14,04,000	2	3,44,000	24·50	6	4,60,000	32·76	21	6,00,000	42·74
7. Madhya Pradesh	95	27,04,036	18	7,48,727	27·69	25	12,92,557	47·80	52	6,62,752	24·51
8. Madras . .	328	66,70,794	9	6,69,873	10·04	46	22,26,450	33·38	273	37,74,471	56·58
9. Mysore . .	288	44,56,000	26	6,86,000	15·39	52	19,68,000	44·16	210	18,02,000	40·44
10. Orissa . .	42	6,03,451	+	+	+	11	2,99,441	49·62	31	3,04,010	50·38
11. Punjab . .	188	30,40 640	45	17,95,253	59·04	—		—	143	12,45,387	40·96

Table No. 16

Protected Water Supply in various States of India during the year 1959—(Concld)

1	2	3	4	5	6	7	8	9	10	11	12
12. Rajasthan .	227	29,47,131	33	13,97,600	47·42	—	—	—	194	15,49,531	52·58
13. Uttar Pradesh	486	86,26,000	50	20,11,000	23·31	22	32,97,000	38·22	414	33,18,000	38·46
14. West Bengal .	99	60,06,416	23	32,13,120	53·49	21	16,18,494	26·95	35	11,74,802	19·56
15. Andaman and Nicobar Islands.	1	8,000	—	—	—	1	8,000	100·00	—	—	—
16. Delhi .	5	14,89,923	1	14,37,000	96·45	1	30,802	2·07	3	22,121	1·48
17. Himachal Pradesh	11	45,146	8	39,566	87·64	2	4,634	10·26	1	946	2·10
18. Laccadive Islands	—	—	—	—	—	—	—	—	—	—	—
19. Manipur .	1	1,32,000@	1	1,32,000@	100·00	—	—	—	—	—	—
20. Pondicherry .	4	1,13,693	2	93,300	82·06	—	—	—	2	20,393	17·94
21. Tripura . .	1	42,609	1	42,609	100·00	—	—	—	—	—	—
TOTAL .	1,987	4,47,96,505	241	1,48,37,202	33·12	229	1,36,97,407	30·58	1,517	1,62,61,896	36·30

NOTE:— +Information not available.
—Nil information.
†Figures relate to 1951 Census of India.
@Mid-year estimated population.

Table No. 17

Vital statistics recorded in different Health Units of India during the year 1959.

Health Units	Year of establishment	Area in sq. miles	Population	No. of villages	Birth Rates		Death Rates		Infant Mortality Rates		Maternal Mortality Rates (Unit Area)	Percentages of still births to total births
					Unit area	Rural areas of the State as a whole	Unit area	Rural areas of the State as a whole	Unit area	Rural areas of the State as a whole		
1. Re-orientation Training Centre and Health Unit, Najafgarh . .	1937	162	64,712	74	45·2	21·4	10·5	6·5	89·7	95·3	1·1	1·3
2. Rural Health Centre and Health Unit, Poonamallee	1935	36	62,833	39	43·6	26·6	19·1	11·7	138·0	91·7	0·6	3·1
3. Health Training Centre, Ramanagram	1937	113	89,133	134	36·1	34·1	10·9	15·5	114·3	73·9	2·4	5·1
4. Rural Health Unit and Training Centre, Singur	1939	56	100,000	105	34·6	23·1	7·3	7·0	47·6	62·1	2·4	+
5. Health Training Centre, Naila . .	1959	+	+	+	+	+	+	+	+	+	+	+
6. Field Demonstration Centre, Rajgir .	1958	+	50,000	72	32·8	12·4	18·7	5·2	95·0	72·8	+	4·6
7. Health Unit, Saoner	1954	75	39,611	39	+	+	+	+	+	+	+	+

NOTE :— +Information not available.

Table No. 18

Medical and public health personnel employed in various Health Units of India during the year 1959.

Health Units	Medical Officers of Health	Asstt. Med. Officers of Health	P.H.N. Super-visors	Sani-tary Inspec-tors	Nurses	Mid-wives	Dais	Lady Health visitors	Health Inspec-tors	Health Asstts.	P. H. Engi-neers	Health Educa-tors	Com-poun-ders	Others
1. Re-orientation Training Centre and Health Unit, Najafgarh.	6	—	1	6	1	10	15	4	—	—	—	—	—	—
2. Rural Health Centre and Health Unit, Poonamallee.	2	1	—	—	—	—	—	5	5	22	1	1	—	94
3. Health Training Centre, Ramanagram.	2	3	—	9	1	21	—	—	—	—	—	—	5	+
4. Rural Health Unit and Training Centre, Singur.	10	+	—	1	3	4	—	5	1	3	—	—	—	2
5. Health Training Centre, Naila.	3	—	—	3	1	3	3	1	—	—	—	—	3	14
6. Field Demonstration Centre, Rajgir.	1	—	—	4	—	—	1	—	—	—	—	—	1	12
7. Health Unit, Saoner	3	—	—	2	1	5	—	3	—	—	1	1	2	24

NOTE:— + Information not available.
— Nil information.

Table No. 19

Maternity and Child Health Services rendered in various Health Units of India during the year 1959.

Health Units	No. functioning at the end of the year			Beds	Attendance at the clinics	No. of home visits paid by the maternity staff of the health unit						No. of deliveries conducted by the unit staff	Medical personnel and others employed in Maternity and Child Welfare Centres						
	Centres	Homes	Clinics			Prenatal	Antenatal	Preschools	Nursing & others	Other visits	Total		No. of Women Medical Officers	No. of Health Visitors	No. of Nurses or Midwives	No. of Dais	Resident Matrons	Maternity Asstts.	Others
1. Re-orientation Training Centre and Health Unit, Najafgarh	7	—	297	+	15,471	14,960	—	13,523	12,201	6,732	47,416	897	2	5	12	12	—	—	5
2. Rural Health Centre, and Health Unit, Poonamallee	8	7	576	32	41,348	36,356	—	—	—	38,054	74,410	2,488	1	4	—	—	1	18	—
3. Health Training Centre, Ramanagaram	2	1	298	10	+	18,233	—	—	7,187	—	25,420	1,411	1	—	22	—	—	—	20
4. Rural Health Unit and Training Centre, Singur	4	—	312	—	12,539	2,353	2,353	—	2,584	6,866	11,803	528	3	2	6	1	—	—	5
5. Health Training Centre, Naila	—	—	108	—	246	—	950	15	1,310	27	2,302	125	1	3	3	3	—	—	16
6. Field Demonstration Centre, Rajgir	—	—	—	—	—	182	867	—	182	—	1,231	180	—	—	—	—	—	—	—
7. Health Unit, Saoner	4	1	206	6	+	+	499	+	+	+	+	446	+	+	+	+	+	+	+

NOTE :— + Information not available.
— Nil information.

Table No. 20

School health services rendered in various Health Units of India during the year 1959.

Health Units	No. of students examined by the Unit Staff	Percentages of students found defective due to					No. of cases referred to hospitals
		Mal-nutrition	Bad teeth and gums	Ear, nose and throat	Eye defects	Others	
1. Re-orientation Training Centre and Health Unit, Najafgarh. . .	1,087	39·20	—	11·50	—	—	114
2. Rural Health Centre and Health Unit, Poonamallee . . .	1,300	16·54	13·69	—	1·15	60·92	+
3. Health Training Centre, Ramanagram	—	—	—	—	—	—	—
4. Rural Health Unit and Training Centre, Singur.	795	6·79	7·80	8·68	1·51	16·10	+
5. Health Training Centre, Naila .	138	—	—	—	—	—	—
6. Field Demonstration Centre, Rajgir .	—	—	—	—	—	—	—
7. Health Unit, Saoner . . .	443	3·61	7·45	10·16	17·83	8·58	—

NOTE :— + Information not available.
— Nil information.

Table No. 21

Deaths and death rates per mille of population due to certain causes of sickness recorded in various Health Units of India during the year 1959.

Health Units	Cholera		Small-pox		Plague		Malaria		Tuberculosis		Leprosy	
	Deaths	Death Rates	Deaths	Death Rates	Deaths	Death Rates	Deaths	Death Rates	Deaths	Death Rates	Deaths	Death Rates
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Re-orientation Training Centre and Health Unit, Najafgarh . .	—	—	—	—	—	—	—	—	18	0·3	—	—
2. Rural Health Centre and Health Unit, Poonamallee . . .	—	—	2	0·03	—	—	—	—	33	0·5	—	—
3. Health Training Centre, Ramanagram	—	—	—	—	—	—	—	—	18	0·2	1	0·01
4. Rural Health Unit and Training Centre, Singur	—	—	1	0·03	—	—	—	—	4	0·1	--	—
5. Health Training Centre, Naila. .	+	+	+	+	+	+	+	+	+	+	+	+
6. Field Demonstration Centre, Rajgir	+	+	+	+	+	+	+	+	+	+	+	+
7. Health Unit, Saoner	+	+	+	+	+	+	+	+	+	+	+	+

NOTE :— + Information not available.
— Nil information.

Table No. 21

Deaths and death rates per mille of population due to certain causes of sickness recorded in various Health Units of India during the year 1959—(Concld.)

Health Units	Enteric Fever		Other Fevers		Anaemias and Debilities		Dysentery and Diarrhoea		Maternal causes		Others	
	Deaths	Death Rates	Deaths	Death Rates	Deaths	Death Rates	Deaths	Death Rates	Deaths	Death Rates	Deaths	Death Rates
1	14	15	16	17	18	19	20	21	22	23	24	25
1. Re-orientation Training Centre and Health Unit, Najafgarh . . .	32	0·5	286	4·4	–	–	83	1·3	–	–	422	6·5
2. Rural Health Centre and Health Unit, Poonamallee	–	–	–	–	–	–	341	5·4	–	–	906	14·4
3. Health Training Centre, Ramanagram.	4	0·04	84	0·90	+	+	100	1·1	16	0·18	+	+
4. Rural Health Unit and Training Cenre, Singur	2	0·07	–	–	–	–	25	0·9	–	–	1	0·03
5. Health Training Centre, Naila .	+	+	+	+	+	+	+	+	+	+	+	+
6. Field Demonstration Centre, Rajgir.	+	+	+	+	+	+	+	+	+	+	+	+
7. Health Unit, Saoner, . . .	+	+	+	+	+	+	+	+	+	+	+	+

NOTE:– + Information not available.
– Nil information.

Table No. 22

Immunisation statistics recorded in various Health Units of India during the year 1959.

Health Units	Inoculations performed				Vaccinations performed			B.C.G. Vaccinations	Qty. of quinine distributed		No. of DDT sprays	Quantity of DDT used (in lbs.)	No. of larvacedal operations
	Anti-Cholera	Anti-Plague	Anti-Typhoid	Others	Primary	Re-vaccination	Total		Powder (in lbs.)	Tablets			
1. Re-orientation Training Centre and Health Unit, Najafgarh.	6,598	—	—	149	3,412	13,529	16,941	—	—	—	—	—	—
2. Rural Health Centre and Health Unit, Poona mallee .	3,699	—	—	—	3,487	13,907	17,394	—	—	—	—	—	—
3. Health Training Centre, Ramanagarm	44,517	—	6	—	3,020	7,068	10,088	28,851	—	—	—	—	—
4. Rural Health Unit and Training Centre, Singur . .	19,729	—	4,059	4,649	6,282	50,796	57,078	18	—	2,124	27,691	9,948	—
5. Health Training Centre, Naila	—	—	—	—	—	—	—	—	—	—	—	—	—
6. Field Demonstration Centre, Rajgir	15,087	—	—	5,408	—	—	—	—	+	+	+	+	+
7. Health Unit, Saoner ·	10,682	—	—	—	1,461	10,373	11,834	5,387	1,508	4,038	14,637	5,675	—

NOTE :—+ Information not available.
— Nil information.

Table No. 23

Health personnel trained at various Health Units of India during the year 1959.

Health Units	Sanitary Inspectors	Dais	Health Visitors	First-Aid	Others
1. Re-orientation Training Centre and Health Unit, Najafgarh.	25	8	37	—	—
2. Rural Health Centre and Health Unit, Poonamallee.	—	11	—	—	—
3. Health Training Centre, Ramanagram.	—	—	—	—	—
4. Rural Health Unit, and Training Centre, Singur.	23	—	3	20	+
5. Health Training Centre, Naila .	15	—	—	—	—
6. Field Demonstration Centre, Rajgir	95	—	—	—	—
7. Health Unit, Saoner . . .	95	15	46	—	20

NOTE :—+Information not available.
—Nil information.

Table No. 24

Health propaganda work done by various Health Units of India during the year 1959.

Health Units	No. of exhibitions held	No. of Children's weeks held	No. of lectures delivered on							No. of health dramas held	No. of leaflets distributed	No. of demonstration with posters	No. of magic lantern shows arranged	No. of cinema shows arranged	No. of group talks held
			Epidemic diseases	Domestic hygiene	T. B. control	Malaria control	Nutrition	Other health subjects	Total						
1. Re-orientation Training Centre and Health Unit, Najafgarh	4	1	—	—	—	—	—	844	844	—	—	—	—	7	844
2. Rural Health Centre and Health Unit, Poonamallee.	3	—	548	355	—	68	—	833	1,804	3	1,500	—	—	3	1,397
3. Health Training Centre, Ramanagram.	—	—	—	—	—	—	—	18	18	—	10,250	3	—	18	23,246
4. Rural Health Unit and Training Centre, Singur.	2	—	—	—	—	—	—	8	8	3	3,000	55	6	38	77
5. Health Training Centre, Naila.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6. Field Demonstration Centre, Rajgir.	—	—	—	—	—	—	—	—	—	—	—	—	—	44	171
7. Health Unit, Saoner	1	2	17	9	10	8	3	3	50	1	1,675	25	5	26	38

NOTE :— —Nil information.

Table No. 25

Number of students examined and break-up of causes of sickness in different States of India during the year 1959.

States/Union Territories	Whether system of medical examination existed or not (Yes/No)	No. of students	Number examined	No. of students found defective due to: Mal-nutrition	Bad teeth	Tonsils	Eye defects	Skin diseases	Respiratory diseases	Enlarge spleen	Not protected against small-pox	Others	Total
1. Andhra Pradesh	Yes	+	+	+	+	+	+	+	+	+	+	+	+
2. Assam	Yes	+	4,605	83	807	542	83	48	27	26	73	109	1,798
3. Bihar	+	+	+	+	+	+	+	+	+	+	+	+	+
4. Bombay	+	+	+	+	+	+	+	+	+	+	+	+	+
5. Jammu and Kashmir	+	+	+	+	+	+	+	+	+	+	+	+	+
6. Kerala	No	+	+	+	+	+	+	+	+	+	+	+	+
7. Madhya Pradesh	Yes	2,131,839	227,033	13,753	9,681	4,877	7,500	9,956	727	553	876	4,065	51,988
8. Madras	+	+	+	+	+	+	+	+	+	+	+	+	+
9. Mysore	+	+	+	+	+	+	+	+	+	+	+	+	+
10. Orissa	+	+	+	+	+	+	+	+	+	+	+	+	+
11. Punjab	Yes	+	66,218	+	+	+	+	+	+	+	+	+	+
12. Rajasthan	Yes	570,549	+	+	+	+	+	+	+	+	+	+	+
13. Uttar Pradesh	Yes	+	70,971	6,275	4,947	2,157	3,543	720	+	53	+	+	17,695
14. West Bengal	+	+	+	+	+	+	+	+	+	+	+	+	+
15. Andaman and Nicobar Islands	+	+	+	+	+	+	+	+	+	+	+	+	+
16. Delhi	+	+	+	+	+	+	+	+	+	+	+	+	+
17. Himachal Pradesh	Yes	+	+	+	+	+	+	+	+	+	+	+	+
18. Manipur	Yes	+	12,102	350	245	110	61	525	214	20	65	215	1,805
19. Pondicherry	No	38,700	+	+	+	+	+	+	+	+	+	+	+
20. Tripura	Yes	17,835	+	460	674	193	76	160	1	1	2	413	1,980

NOTE :— + Information not available.

Table No. 26

Number of jails functioning in different States of India during the years 1959 *and* 1958.

States/Union Territories	Central Jails		District Jails		Subsidiary Jails		Temporary Jails		Borstal Schools		Juvenile Jails		Special Jails		Total	
	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958
1. Andhra Pradesh	5	5	6	6	156	154	—	—	—	—	—	—	—	—	167	165
2. Assam	—	—	16	16	—	—	—	—	—	—	—	—	1	1	17	17
3. Bihar	6	5	13	13	41	41	—	—	—	—	—	—	—	—	60	59
4. Bombay	8	8	17	17	342	342	—	—	—	—	—	—	3	—	370	367
5. Jammu and Kashmir	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
6. Kerala	3	3	—	—	19	9	—	3	1	—	—	—	2	—	25	15
7. Madhya Pradesh	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
8. Madras	8	7	1	2	128	129	—	1	1	1	—	—	—	—	138	140
9. Mysore	4	+	3	+	—	+	—	+	—	+	—	+	4	+	11	+
10. Orissa	—	—	12	12	48	48	—	—	—	—	1	1	—	—	61	61
11. Punjab	3	3	10	10	17	18	—	—	—	—	—	—	—	—	30	31
12. Rajasthan	2	2	8	8	75	75	—	—	—	—	1	1	2	2	88	88
13. Uttar Pradesh	6	6	50	50	2	2	2	2	2	—	—	—	—	—	62	60
14. West Bengal	5	5	9	9	33	33	—	2	1	1	—	—	2	2	50	52

Table No. 26

Number of jails functioning in different States of India during the years 1959 *and* 1958—(Concld.)

States/Union Territories	Central Jails		District Jails		Subsidiary Jails		Temporary Jails		Borstal Schools		Juvenile Jails		Special Jails		Total	
	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958
15 Andaman and Nicobar Islands	1	1	–	–	–	–	–	–	–	–	–	–	–	–	1	1
16. Delhi	+	1	+	–	+	–	+	–	+	–	+	–	+	–	+	1
17. Himachal Pradesh . . .	–	–	3	3	3	3	–	–	6	–	–	–	–	–	12	6
18. Manipur	1	+	–	+	–	+	–	+	–	+	–	+	–	+	1	+
19. Pondicherry	+	1	+	1	+	2	+	–	+	–	+	–	+	–	+	4
20. Tripura	1	1	–	–	8	–	–	–	–	–	–	–	–	–	9	1
TOTAL .	53	48	148	147	872	856	2	8	11	2	2	2	14	5	1,102	1,068

NOTE :— + Information not available.
– Nil information.

Table No. 27

Number of prisoners against authorised accommodation in jails of various States of India during the years 1959 *and* 1958.

States/Union Territories	Average daily population		Authorised accommodation		Number of persons per 100 units of authorised accommodation	
	1959	1958	1959	1958	1959	1958
1. Andhra Pradesh	4,735	4,354	3,545	4,721	134	123
2. Assam	4,115	4,432	4,155	4,155	99	107
3. Bihar	21,063	22,573	17,486	16,176	120	139
4. Bombay	22,478	20,326	21,392	21,392	105	96
5. Jammu and Kashmir	+	+	+	+	+	+
6. Kerala	3,171	2,357	4,312	3,057	74	77
7. Madhya Pradesh	+	+	+	+	+	+
8. Madras	18,482	17,934	14,453	14,453	128	71
9. Mysore	4,588	+	4,775	+	96	+
10. Orissa	4,282	4,235	5,467	5,508	78	77
11. Punjab	8,583	8,311	8,674	8,927	99	93
12. Rajasthan	3,272	3,304	5,815	5,815	56	57
13. Uttar Pradesh	35,829	35,517	36,049	36,001	99	99
14. West Bengal	14,635	14,350	12,619	12,589	116	114

Table No. 27

Number of prisoners against authorised accommodation in jails of various States of India during the years 1959 *and* 1958—(Concld.)

States/Union Territories	Average daily population		Authorised accommodation		Number of persons per 100 units of authorised accommodation	
	1959	1958	1959	1958	1959	1958
15. Andaman and Nicobar Islands . .	40	39	105	100	38	39
16. Delhi	+	+	+	+	+	+
17. Himachal Pradesh . . .	158	139	226	278	70	50
18. Manipur	262	176	277	+	95	+
19. Pondicherry	+	+	+	+	+	+
20. Tripura	440	231	331	163	133	142

NOTE :— + Information not available.
— Nil information.

Table No. 28

Hospital Admission Rates, Death Rates and Constantly Sick Rates per mille of average daily population in jails of various States of India during the years 1959 *and* 1958.

States/Union Territories	Hospital Admission Rates per mille of average daily population		Death Rates per mille of average daily population		Constantly Sick Rates per mille of average daily population	
	1959	1958	1959	1958	1959	1958
1. Andhra Pradesh	446·46	600·12	18·16	15·38	17·10	16·99
2. Assam	519·32	462·32	9·72	10·38	37·42	20·04
3. Bihar	829·38	1,076·02	7·11	8·46	39·38	34·17
4. Bombay	631·49	450·09	4·07	2·20	21·40	13·30
5. Jammu and Kashmir	+	+	+	+	+	+
6. Kerala	1,247·87	399·24	1·26	—	23·16	49·33
7. Madhya Pradesh	+	+	+	+	+	+
8. Madras	292·01	433·25	3·41	4·79	11·46	11·09
9. Mysore	1,413·47	+	1·74	+	34·65	+
10. Orissa	2,314·32	1,363·38	9·34	6·38	60·30	59·79
11. Punjab	925·20	1,060·90	1·05	2·41	26·56	21·30
12. Rajasthan	999·10	804·17	1·22	2·42	30·90	23·30
13. Uttar Pradesh	508·70	657·68	2·80	3·90	16·40	17·40
14. West Bengal	522·04	456·95	2·70	2·58	35·67	31·84

Table No 28

Hospital Admission Rates, Death Rates and Constantly Sick Rates per mille of average daily population in jails of various States of India during the years 1959 *and* 1958—(Concld.)

States/Union Territories	Hospital Admission Rates per mille of average daily population		Death Rates per mille of average daily population		Constantly Sick Rates per mille of average daily population	
	1959	1958	1959	1958	1959	1958
15. Andaman and Nicobar Islands	375·00	484·00	—	—	175·00	280·20
16. Delhi	+	573·65	+	3·89	+	11·33
17. Himachal Pradesh	10,943·03	4,424·70	—	14·40	132·90	140·00
18. Manipur	603·05	562·50	3·82	5·70	83·97	85·00
19. Pondicherry	+	351·00	+	+	+	+
20. Tripura	575·00	1,332·41	+	..	15·91	19·94

NOTE :— +Information not available.
— Nil information.

Table No. 29

Admission Rates per mille of average daily population due to certain causes of sickness in jails of various States of India during the years 1959 *and* 1958.

States/Union Territories	Years	Cholera	Small-pox	Plauge	Enteric Fever	Influenza	Malaria	Pneumonia	T. B. of Lung
1	2	3	4	5	6	7	8	9	10
1. Andhra Pradesh	1959	—	1·46	—	—	23·23	58·29	1·90	18·80
	1958	4·13	10·79	—	1·15	19·06	103·58	0·46	5·97
2. Assam	1959	—	—	—	1·20	70·20	48·40	9·20	14·60
	1958	—	0·09	—	2·48	97·50	60·20	3·88	0·90
3. Bihar	1959	—	5·30	—	19·70	50·80	89·10	5·50	9·90
	1958	0·22	1·82	—	32·62	40·44	114·24	1·99	8·95
4. Bombay	1959	—	0·79	—	4·05	30·08	72·38	1·85	30·54
	1958	0·05	0·10	—	1·51	16·43	70·65	3·89	20·96
5. Jammu and Kashmir	1959	+	+	+	+	+	+	+	+
	1958	+	+	+	+	+	+	+	+
6. Kerala	1959	—	4·70	—	19·24	93·03	4·42	1·89	16·70
	1958	—	2·97	—	7·60	111·60	2·97	32·20	6·60
7. Madhya Pradesh	1959	+	+	+	+	+	+	+	+
	1958	+	+	+	+	+	+	+	+
8. Madras	1959	—	—	—	1·89	20·13	2·81	0·97	10·82
	1958	—	0·27	—	0·07	0·87	15·94	2·31	10·82
9. Mysore	1959	—	—	—	3·70	134·92	125·11	4·14	21·79
	1958	+	+	+	+	+	+	+	+
10. Orissa	1959	—	—	—	30·36	58·14	209·69	7·94	11·44
	1958	—	1·18	—	5·43	72·96	210·15	8·74	18·65

Table No. 29

Admission Rates per mille of average daily population due to certain causes of sickness in jails of various States of India during the years 1959 *and* 1958—(Contd.)

1	2	3	4	5	6	7	8	9	10
11. Punjab	1959	—	—	—	—	—	69·60	6·10	35·70
	1958	—	0·12	—	5·60	2·30	181·80	4·80	32·00
12. Rajasthan	1959	—	0·30	—	1·80	12·83	279·60	3·40	7·90
	1958	—	0·12	—	5·42	2·17	174·95	4·57	38·80
13. Uttar Pradesh	1959	—	0·14	—	5·28	9·10	70·11	4·47	11·28
	1958	0·11	0·51	—	2·84	23·99	140·41	4·31	15·79
14. West Bengal	1959	0·20	1·43	2·19	5·90	189·82	53·02	3·62	20·50
	1958	0·07	3·48	—	4·53	—	47·56	3·97	18·68
15. Andaman and Nicobar Islands	1959	—	—	—	—	—	—	—	—
	1958	—	—	—	—	—	76·40	—	—
16. Delhi	1959	+	+	+	+	+	+	+	+
	1958	—	—	—	1·29	—	14·27	4·54	14·92
17. Himachal Pradesh	1959	—	—	—	31·60	550·60	208·80	—	6·30
	1958	—	—	—	—	683·50	295·00	—	—
18. Manipur	1959	—	—	—	19·08	83·97	22·90	—	11·45
	1958	—	—	—	—	22·70	28·40	—	22·70
19. Pondicherry	1959	+	+	+	+	+	+	+	+
	1958	—	48·00	—	—	—	—	—	16·80
20. Tripura	1959	—	—	—	—	229·69	34·08	2·27	—
	1958	—	—	—	8·65	259·56	21·63	34·61	—

NOTE :— +Information not available.
—Nil information.

Table No. 29

Admission Rates per mille of average daily population due to certain causes of sickness in jails of various States of India during the years 1959 *and* 1958—(Contd.)

States/Union Territories	Years	Dysentery	Diarrhoea	Other Respiratory diseases	Anaemia	Pyrexia of uncertain origin	Other deficiency diseases	All other causes	Total
1	2	11	12	13	14	15	16	17	18
1. Andhra Pradesh	1959	80·88	10·98	16·47	29·78	44·35	—	159·87	446·46
	1958	64·08	46·16	17·69	24·80	65·69	—	236·56	600·12
2. Assam	1959	100·60	35·40	20·90	28·40	8·30	57·40	124·90	519·32
	1958	91·60	41·10	22·80	23·00	43·80	4·30	70·40	462·32
3. Bihar	1959	152·70	63·10	60·40	47·10	15·70	—	642·30	829·38
	1958	143·52	37·26	91·21	35·48	13·86	12·58	541·81	1076·02
4. Bombay	1959	89·98	39·10	43·16	27·16	19·72	0·46	272·21	631·49
	1958	65·89	44·69	10·70	17·26	11·43	34·52	152·08	450·09
5. Jammu and Kashmir	1959	+	+	+	+	+	+	+	+
	1958	+	+	+	+	+	+	+	+
6. Kerala	1959	123·94	132·76	106·91	109·43	65·91	93·98	474·93	1247·87
	1958	38·20	26·30	35·60	26·30	32·20	11·03	112·00	399·24
7. Madhya Pradesh	1959	+	+	+	+	+	+	+	+
	1958	+	+	+	+	+	+	+	+
8. Madras	1959	30·19	8·11	16·50	11·14	55·94	—	133·48	292·01
	1958	75·38	12·84	16·59	13·34	0·09	16·59	41·05	432·25
9. Mysore	1959	103·97	71·27	193·77	49·48	195·29	279·42	237·14	1413·47
	1958	+	+	+	+	+	+	+	+

Table No. 29

Admission Rates per mille of average daily population due to certain causes of sickness in jails of various States of India during the years 1959 *and* 1958—(Concld.)

1	2	11	12	13	14	15	16	17	18
10. Orissa	1959	187·28	148·28	248·92	143·60	82·66	34·79	1151·20	2314·32
	1958	128·22	162·45	125·62	53·36	65·17	23·61	487·83	1363·38
11. Punjab	1959	77·30	30·90	414·10	51·60	—	414·10	67·50	925·20
	1958	60·60	65·90	56·40	91·30	95·80	2·60	449·40	1060·90
12. Rajasthan	1959	61·10	63·90	66·00	30·60	70·30	0·90	400·40	999·10
	1958	70·39	63·41	54·57	87·84	92·17	2·63	432·56	804·17
13. Uttar Pradesh	1959	26·65	21·66	26·51	21·18	77·48	—	234·84	508·69
	1958	28·26	19·57	40·80	20·12	86·66	1·13	272·17	657·68
14. West Bengal	1959	207·93	89·65	98·05	58·18	115·34	44·15	507·69	522·04
	1958	166·48	110·10	107·94	50·45	254·56	38·32	599·30	456·95
15. Andaman and Nicobar Islands	1959	—	—	100·00	—	—	—	275·00	375·00
	1958	50·90	25·50	178·30	—	—	—	152·90	484·00
16. Delhi	1959	+	+	+	+	+	+	+	+
	1958	19·46	6·46	43·78	18·81	162·23	—	288·12	573·65
17. Himachal Pradesh	1959	284·80	202·50	373·40	234·00	—	—	1487·30	10943·03
	1958	316·60	201·40	191·38	352·50	—	50·40	611·60	4424·70
18. Manipur	1959	38·16	45·80	26·72	68·70	125·95	7·63	152·67	603·05
	1958	22·70	28·40	—	62·50	130·70	—	244·30	562·50
19. Pondicherry	1959	+	+	+	+	+	+	+	+
	1958	125·00	52·90	—	12·00	—	—	96·10	351·00
20. Tripura	1959	39·52	68·16	29·76	24·46	18·17	18·17	95·41	575·00
	1958	164·39	173·04	311·47	34·61	224·95	—	99·50	1332·41

NOTE :— +Information not available.
—Nil information.

Table No. 30

Case fatality rates in jails of various States of India during the years 1959 *and* 1958.

States/Union Territories	Years	Cholera	Small-pox	Plague	Enteric fever	Influenza	Malaria	Pneumonia	T.B. of lung	Dysentery	Diarrhoea	Other Respiratory diseases	Anaemia	Pyrexia of uncertain origin	Other deficiency diseases	All other causes	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Andhra Pradesh . .	1959	—	—	—	—	—	0·36	11·11	12·35	4·70	—	1·28	12·76	—	—	4·79	4·07
	1958	—	—	—	—	—	0·22	50·00	11·54	1·79	2·49	—	2·78	—	—	4·76	2·56
2. Assam	1959	—	—	—	—	—	—	—	3·3	0·97	6·16	4·65	11·97	—	1·27	0·78	1·87
	1958	—	—	—	18·18	—	3·37	11·76	50·0	0·98	1·10	4·95	5·66	1·54	5·26	3·20	2·24
3. Bihar	1959	—	—	—	0·24	—	0·27	0·90	15·31	0·40	0·50	0·30	1·31	0·30	—	0·55	0·61
	1958	20·00	7·31	—	0·26	—	0·31	6·67	18·31	0·92	0·36	0·48	1·75	0·34	—	0·65	0·98
4. Bombay	1959	—	—	—	1·64	—	—	7·14	1·75	0·22	—	0·30	1·20	0·67	—	0·95	0·64
	1958	—	—	—	3·23	—	—	2·50	2·55	0·15	0·11	0·14	1·70	—	0·45	0·67	0·50
5. Jammu and Kashmir .	1959	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1958	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
6. Kerala	1959	—	—	—	—	—	—	—	-	—	—	0·29	—	—	0·34	0·13	0·10
	1958	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7. Madhya Pradesh . .	1959	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1958	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
8. Madras	1959	—	—	—	5·71	—	—	16·66	2·00	0·18	—	0·66	3·88	0·19	—	1·66	1·17
	1958	—	—	—	—	—	—	2·77	3·33	0·08	—	1·48	1·08	—	1·43	1·77	1·11
9. Mysore	1959	—	—	—	—	—	—	—	4·00	—	—	0·11	—	—	—	0·28	0·12
	1958	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Table No. 30

Case fatality rates in jails of various States of India during the years 1959 *and* 1958—(Concld.)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
10. Orissa	1959	—	—	—	—	—	0·11	2·94	—	0·62	0·31	0·19	0·81	0·56	—	0·45	0·40
	1958	—	—	—	4·35	—	0·34	—	2·53	0·55	1·02	—	0·88	0·36	—	0·29	0·47
11. Punjab	1959	—	—	—	—	—	0·17	—	0·33	—	0·38	—	0·67	—	0·08	—	0·11
	1958	—	—	—	—	—	—	2·63	1·17	0·17	0·38	0·22	0·14	—	—	0·31	0·24
12. Rajasthan . . .	1959	—	—	—	—	—	—	—	7·70	—	—	—	—	—	—	0·20	0·12
	1958	—	—	—	—	—	—	—	15·10	—	—	0·90	—	—	—	0·20	0·30
13. Uttar Pradesh . . .	1959	—	20·00	—	—	—	0·08	7·50	2·70	0·20	0·01	0·30	1·10	0·10	—	0·70	0·55
	1958	50·00	—	—	1·98	0·12	0·02	4·57	3·03	—	0·43	0·41	1·47	0·39	2·50	0·79	0·60
14. West Bengal . . .	1959	33·33	—	—	—	—	—	11·32	2·00	—	—	0·40	1·80	—	—	0·80	0·19
	1958	—	—	—	1·54	—	—	12·30	2·98	0·04	0·12	0·12	0·96	—	0·18	0·09	0·17
15. Andaman and Nicobar Islands	1959	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1958	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16. Delhi	1959	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1958	—	—	—	—	—	—	—	8·69	—	10·00	—	3·44	—	—	0·45	0·68
17. Himachal Pradesh . .	1959	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1958	—	—	—	—	—	—	—	—	—	3·60	—	2·00	—	—	—	0·30
18. Manipur	1959	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2·50	2·50
	1958	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2·10	2·10
19. Pondicherry . . .	1959	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1958	—	—	—	—	—	—	—	—	1·90	—	—	20·00	—	—	25·00	2·00
20. Tripura	1959	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1958	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

NOTE:— +Information not available.
—Nil information.

Table No. 31

Death Rates per mille of average daily population due to certain causes of sickness in jails of various States of India during the years 1959 *and* 1958

States/Union Territories	Years	Cholera	Small-pox	Plague	Enteric fever	Influenza	Malaria	Pneumonia	T.B. of lung	Dysentery	Diarrhoea	Other Respiratory diseases	Anaemia	Pyrexia of uncertain origin	Other deficiency diseases	All other causes	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Andhra Pradesh	1959	—	—	—	—	—	0·21	0·21	2·32	3·80	—	0·21	3·80	—	—	7·63	18·16
	1958	—	—	—	—	—	0·23	0·23	0·69	1·15	1·15	—	0·69	—	—	11·25	15·38
2. Assam	1959	—	—	—	—	—	—	—	0·50	0·90	2·20	0·90	3·40	—	0·70	0·90	9·72
	1958	—	—	—	0·45	—	2·03	0·45	0·45	0·90	0·45	1·13	1·35	0·68	0·23	2·21	10·38
3. Bihar	1959	—	—	—	0·50	—	0·24	0·05	1·52	0·60	0·30	0·19	0·60	0·05	—	3·50	7·11
	1958	0·04	0·13	—	0·09	—	0·36	0·13	1·64	1·33	0·13	0·44	0·62	0·04	—	3·50	8·46
4. Bombay	1959	—	—	—	0·06	—	—	0·13	0·52	0·19	—	0·13	0·32	0·13	—	2·59	4·07
	1958	—	—	—	0·04	—	—	0·10	0·54	0·10	0·04	0·04	0·30	—	0·04	1·20	2·20
5. Jammu and Kashmir	1959	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1958	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
6. Kerala	1959	—	—	—	—	—	—	—	—	—	—	0·31	—	—	0·31	0·63	1·26
	1958	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7. Madhya Pradesh	1959	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1958	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
8. Madras	1959	—	—	—	0·10	—	—	0·16	0·22	0·54	—	0·11	0·43	0·10	—	2·22	3·41
	1958	—	—	—	—	—	—	0·07	0·36	0·07	—	0·29	0·14	—	0·29	0·07	4·79
9. Mysore	1959	—	—	—	—	—	—	—	0·87	—	—	0·22	—	—	—	0·65	1·74
	1958	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Table No. 31

Death Rates per mille of average daily populatian due to certain causes of sickness in jails of various States of India during the years 1959 *and* 1958—(Concld.)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
10. Orissa	1959	—	—	—	—	—	0·23	0·23	—	1·17	0·47	0·47	1·17	0·47	—	5·14	9·34
	1958	—	—	—	0·24	0·70	—	—	0·47	0·70	1·65	0·47	0·47	0·24	—	1·42	6·38
11. Punjab	1959	—	—	—	—	—	0·12	—	0·12	—	0·12	—	0·35	—	0·35	—	1·05
	1958	—	—	—	—	—	—	0·32	0·36	0·12	0·24	0·12	0·12	—	—	1·32	2·41
12. Rajasthan . . .	1959	—	—	—	—	—	—	—	0·61	—	—	—	—	—	—	0·61	1·22
	1958	—	—	—	—	—	—	—	1·50	—	—	0·30	—	—	—	0·60	2·42
13. Uttar Pradesh . . .	1959	—	0·03	—	—	—	0·05	0·30	0·30	0·05	0·03	0·08	0·22	0·08	—	1·60	2·80
	1958	0·06	—	—	0·12	0·03	0·06	0·20	0·48	—	0·08	0·17	0·31	0·34	0·06	2·14	3·90
14. West Bengal . . .	1959	0·06	—	—	—	—	—	0·41	0·41	—	—	0·34	1·25	—	—	0·41	2·70
	1958	—	—	—	0·07	—	—	0·49	0·56	0·07	0·14	0·14	0·49	—	0·07	0·56	2·58
15. Andaman and Nicobar Islands	1959	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1958	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16. Delhi	1959	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1958	—	—	—	—	—	—	—	1·29	—	0·64	—	0·64	—	—	1·29	3·89
17. Himachal Pradesh . .	1959	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1958	—	—	—	—	—	—	—	—	—	7·20	—	7·20	—	—	—	14·40
18. Manipur	1959	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3·82	3·82
	1958	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5·70	5·70
19. Pondicherry . . .	1959	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1958	—	—	—	—	—	—	—	—	2·40	—	—	2·40	—	—	2·40	7·20
20. Tripura	1959	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1958	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

NOTE.— +Information not available.
— Nil information.

Table No. 32

Immunisation statistics recorded in jails of various States of India during the year 1959.

States/Union Territories	Anti-cholera inoculations performed	Smallpox vaccinations performed	Anti-plague inoculations performed	Anti-typhoid inoculations performed	B.C.G. vaccinations performed
1	2	3	4	5	6
1. Andhra Pradesh	+	+	+	+	+
2. Assam	3,171	10,355	—	2,130	—
3. Bihar	24,792	36,564	898	6,802	—
4. Bombay	17,379	39,857	—	72	—
5. Jammu & Kashmir	+	+	+	+	+
6. Kerala	—	—	—	1,064	—
7. Madhya Pradesh	+	+	+	+	+
8. Madras	82,325	84,357	—	83,320	20
9. Mysore	2,591	5,736	—	112	—
10. Orissa	6,241	13,572	—	3,477	419
11. Punjab	738	3,285	—	2,122	—
12. Rajasthan	2,118	3,937	—	571	—
13. Uttar Pradesh	12,031	11,069	—	3,353	—
14. West Bengal	80,819	1,37,392	—	43,422	—

Table No. 32

Immunisation statistics recorded in jails of various States of India during the year 1959—(Concld.)

1	2	3	4	5	6
15. Andaman and Nicobar Islands	—	—	—	—	—
16. Delhi	+	+	+	+	+
17. Himachal Pradesh	—	—	1	45	20
18. Manipur	289	689	—	409	—
19. Pondicherry	+	+	+	+	+
20. Tripura	5,950	5,950	—	—	—

NOTE:— + Information not available.
— Nil information.

Table No. 33

Percentages of prisoners, who gained weight, remained stationary etc., in jails of various States of India during the years 1959 *and* 1958.

States/Union Territories	Percentages of prisoners					
	Gained weight		Remained stationary		Weight lost	
	1959	1958	1959	1958	1959	1958
1. Andhra Pradesh . . .	45·00	+	52·00	+	3·00	+
2. Assam	42·51	56·28	49·20	33·25	8·30	10·47
3. Bihar	53·00	49·00	42·00	47·00	5·00	4·00
4. Bombay	18·00	25·00	75·00	67·00	7·00	8·00
5. Jammu and Kashmir . .	+	+	+	+	+	+
6. Kerala	66·68	61·00	31·88	32·00	1·44	7·00
7. Madhya Pradesh . . .	+	+	+	+	+	+
8. Madras	61·26	66·23	36·94	32·65	1·80	1·12
9. Mysore	11·00	+	85·00	+	4·00	+
10. Orissa	65·19	64·93	29·73	29·09	5·10	6·00
11. Punjab	24·76	30·70	72·37	66·00	2·87	3·30
12. Rajasthan	56·10	61·50	38·00	31·50	5·90	7·60
13. Uttar Pradesh	42·02	42·50	55·41	54·20	2·57	3·30
14. West Bengal	19·00	17·66	78·00	79·17	3·00	3·15

Table No. 33

Percentages of prisoners, who gained weight, remained stationary etc., in jails of various States of India during the years 1959 *and* 1958—(Concld.)

States/Union Territories	Percentages of prisoners					
	Gained weight		Remained stationary		Weight lost	
	1959	1958	1959	1958	1959	1958
15. Andaman and Nicobar Islands .	45·00	23·00	55·00	75·00	—	2·00
16. Delhi	+	+	+	+	+	+
17. Himachal Pradesh . . .	52·00	60·00	32·00	25·00	16·00	15·00
18. Manipur	32·00	15·00	50·00	80·00	18·00	5·00
19. Pondicherry	+	+	+	+	+	+
20. Tripura	22·00	30·00	77·00	70·00	1·00	—

NOTE:— + Information not available.
— Nil information.

Table No. 34

Number of fairs and festivals held in various States of India during the year 1959.

States/Union Territories	No. of fairs and festivals held	Approximate total congregation	No. of fairs and festivals banned	Infectious diseases hospitals opened	No. of anti-cholera inoculations performed	No. of small-pox vaccinations performed	Any outbreak of epidemic diseases
1	2	3	4	5	6	7	8
1. Andhra Pradesh	115	32,31,000	–	–	+	+	–
2. Assam	7	63,000	–	–	–	–	–
3. Bihar	+	+	+	+	+	+	+
4. Bombay	*12	+	–	–	–	–	–
5. Jammu and Kashmir	+	+	+	+	+	+	+
6. Kerala	126	32,00,000	–	2@	541	59,843	–
7. Madhya Pradesh	30	16,60,000	–	–	–	–	–
8. Madras	500	+	–	–	–	–	–
9. Mysore	+	+	+	+	+	+	+
10. Orissa	+	+	+	+	+	+	+
11. Punjab	+	+	+	+	+	+	+
12. Rajasthan	111	8,96,000	6	–	–	–	–
13. Uttar Pradesh	+	+	+	+	+	+	+
14. West Bengal	+	+	+	+	+	+	+

Table No. 34

Number of fairs and festivals held in various states of India during the year 1959—(Concld.)

1	2	3	4	5	6	7	8
15. Andaman and Nicobar Islands	+	+	+	+	+	+	+
16. Delhi	+	+	+	+	+	+	+
17. Himachal Pradesh	19	2,02,000	+	+	208£	+	+
18. Manipur	2	+	—	—	—	—	—
19. Tripura	7	+	—	—	412	3,413	—
20. Pondicherry	9	40,000	—	—	—	—	—

NOTES :—+ Information not available.

— Nil information.

* Each fair constituted a congregation of 10,000 or more pilgrims.

@ Indicate sheds.

£ Combined figures for anti-cholera inoculations and small-pox vaccinations.

Table No. 35

Number of food samples examined, found adulterated, number of prosecutions launched, number punished and the fine realised from the adulterators in different States of India during the year 1959.

States/Union Territories	Number of food samples examined	Number found adulterated	Percentage of food samples found adulterated to total examined	Break-up of adulteration (in percentages) in various food stuffs to total adulterated food samples						No. of prosecutions launched	No. punished	Fine realised (in Rs.)
				Milk	Mik products	Ghee	Edible Oil	Flours	Other food-stuffs			
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Andhra Pradesh	3,324	1,323	39·8	59·7	59·6	40·5	20·2	2·5	13·8	1,275	1,504	62,716
2. Assam .	624	301	48·2	65·3	28·1	25·0	28·4	17·8	58·3	+	+	+
3. Bihar .	+	+	+	+	+	+	+	+	+	+	+	+
4. Bombay .	26,435	8,988	33·6	36·0	53·0	37·0	11·0	10·0	35·0	7,564	6,449	2,71,133
5. Jammu and Kashmir	+	+	+	+	+	+	+	+	+	+	+	+
6. Kerala .	5,854	1,525	26·1	51·6	42·1	7·4	2·8	33·5	14·3	1,110	801	52,635
7. Madhya Pradesh	1,298	554	42·7	+	+	+	+	+	+	348†	146†	20,977†
8. Madras .	6,751	1,657	24·5	33·8	+	24·0	11·5	3·6	+	+	+	+
9. Mysore .	+	+	+	+	+	+	+	+	+	+	+	+
10. Orissa .	+	+	+	+	+	+	+	+	+	+	+	+
11. Punjab .	14,645	3,676	25·1	30·5	+	14·0	+	+	+	+	+	+

Table No. 35

Number of food samples examined, found adulterated, number of prosecutions launched, number punished and the fine realised from the adulterators in different States of India during the year 1959—(Concld.)

1	2	3	4	5	6	7	8	9	10	11	12	13
12. Rajasthan	14,364	5,101	35·5	35·8	+	40·9	17·0	18·9	47·5	+	+	+
13. Uttar Pradesh	28,441	6,078	21·6	25·1	14·8	18·3	13·7	20·6	28·4	6,299	3,746	3,43,714
14. West Bengal	+	+	+	+	+	+	+	+	+	+	+	+
15. Andaman and Nicobar Islands	+	+	+	+	+	+	+	+	+	+	+	+
16. Delhi .	+	+	+	+	+	+	+	+	+	+	+	+
17. Himachal Pradesh	223	111	49·4	39·0	12·5	48·7	31·0	16·6	94·0	107	45	4,045
18. Manipur	+	+	+	+	+	+	+	+	+	+	+	+
19. Pondicherry	71	13	18·3	+	+	+	+	+	+	+	+	+
20. Tripura* .	113	45	40·0	56·0	40·0	+	38·0	+	33·3	68	21	2,760

NOTE :—+ Information not available.
† Figures relate to first 6 months of the year.
* Figures relate to Agartala Municipality only.

Table No. 36

Number of hospitals, dispensaries, beds etc., on different Railways in India during the years 1959 and 1958.

Categories	Central Railway		Northern Railway		Southern Railway		Eastern Railway		Western Railway		South Eastern Railway		North Eastern Railway		N.E.F. Railway		Chittaranjan Locomotive Works		Total	
	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958
1. Hospital	10	10	9	9	10*	13	8†	10	10	10	8	7	4	4	9	9	1	1	69	73
Beds	517	500	595	587	655	620	759	583	258	258	424	377	448	307	287	273	70	70	4,043	3,575
2. Dispensaries	55	53	86	82	72	69	—	—	65	65	57	56	37	35	54	53	6	6	432	419
Beds	49	47	248	232	58	49	—	—	111§	114	7	7	45	33	21	21	—	—	539	503
3. T. B. Sanatoria and Clinics	—	—	6	6	8	1	10	10	8	8	2	2	5	1	6	4	—	—	45	32
Beds	—	—	20	20	66	26	40	18	12	12	15	15	56	25	10	10	—	—	228	125
4. Other institutions	—	—	—	—	17‡	19	10	10	—	—	—	—	—	—	—	—	—	—	27	29
Beds	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5. T. B. beds reserved for railway staff in other Sanatoria	145	105	186	80	207	151	230	125	65	65	101	101	53	28	24	24	12	12	1,023	691

NOTE:— *The number of hospitals was reduced from 13 to 10 due to the closure of T.B. Hospital at Pattabiram and closure of beds at Tiruchirapalli Junction Hospital and also due to Shoranur Hospital with 5 beds having been shown under Health units instead of under Hospitals.

†The number of hospitals was brought down from 10 to 8 in view of the fact that according to the recent directives of the Railway Board, New Delhi hospitals without nursing facilities was not be treated as hospital.

‡2 Maternity and Child Welfare Centres were closed in Madura Division.

§3 beds transferred from dispensaries and used in the Maternity Centres.

— Nil information.

Table No. 37

Medical and health personnel employed on different Railways in India during the years 1959 *and* 1958.

Railways	Medical Superior Services		Assistant Surgeons		Nursing Staff		Compounders		Other Staff	
	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958
1. Central	21	20	178	173	199	187	141	135	871	714
2. Northern	23	22	210	210	170	162	183	172	1,225	1,160
3. Southern	21*	23	205	199	184	182	192†	197	165	162
4. Eastern	21	19	176	159	246	149	118	107	1,156	1,008
5. Western	20	17	222	192	185	132	205	187	959	834
6. South Eastern . . .	19	19	166	150	160	134	84	77	348	338
7. North Eastern . . .	7	7	98	79	127	83	84	70	2,519	813
8. North East Frontier . .	15	12	114	109	86	68	102	98	545	499
9. Chittaranjan Locomotive Works	1	1	17	17	17	17	13	11	3	2
TOTAL .	148	140	1,386	1,281	1,374	1,114	1,122	1,054	7,791	5,530

NOTE :—* Due to exclusive of the posts of leave reserve the Divisional Medical Officer and Divisional Medical Officer of Health were held in abeyance.

†Due to posting of 5 clerks in place of compounders.

Table No. 38

Number of Maternity and Child Welfare Centres, beds, staff employed together with the work done on different Railways in India during the years 1959 *and* 1958.

Categories	Central Railway		Northern Railway ♀		Southern Railway		Eastern Railway		Western Railway		South-Eastern Railway		North-Eastern Railway		North-East Frontier Railway		Chittaranjan Locomotive Works	
	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958
1. No. of Maternity and Child Welfare Centres	3	3	—	—	19	19	63	58	20	15	24	24	23	1	5	5	1	1
2. Beds	18	18	—	—	31	10	—	—	78	75	—	—	78	—	20	—	—	—
3. Supervisors	—	—	—	—	6	6	—	—	—	—	8	8	5	2	5	5	—	—
4. Nurses	1	1	—	—	31*	36	184	92	—	—	—	—	10	4	—	—	—	—
5. Midwives	8	8	—	—	—	—	45	45	37	29	53	56	23	22	5	5	2	2
6. Dais	—	—	—	—	13†	15	—	—	—	—	—	—	1	1	—	—	—	—
7. Health Visitors	1	1	—	—	5	5	6	5	—	—	1	5	2	1	—	—	—	—
8. Ayahs	2	2	—	—	—	—	—	—	34	31	—	—	—	—	—	—	2	2
Number of home visits paid:																		
1. Post-natal	435	167	9,852	10,092	19,240	15,761	51,696	28,599	1,8 3	1,008	6,868	9,011	1,233	1,031	8,789	4,698	2,949‡	4,050‡
2. Ante-natal	6,343	5,344	11,691	7,614	42,123	39,294	38,630	24,021	4,842	3,781	5,341	8,307	1,267	1,013	8,663	6,892	+	+
3. Infant visits	80	71	17,049	21,445	24,548	15,191	85,485	44,228	4,068	1,257	6,314	8 884	1,212	239	6,314	3,045	2,013	1,195
4. No. of labour cases attended	572	616	1,678	1,118	3,492	1,454	4,094	3,797	3,363	2,679	3,264	5,329	1,327	1,220	2,191	942	172§	92§
5. No. of deliveries conducted	1,032	809	1,085	1,051	2,939	1,324	3,119	2,927	3,259	2,661	2,363	3,151	1,689	1,386	2,191	1,246	+	+
6. Attendance at the clinics	12,035	10,254	45,934	49,551	139,026	188,046	40,054	18,810	11,166	7,550	6,683	2,839	7,794	6,483	2,384	443	2,637	1,179
7. Mother classes held, if any.	—	—	390	141	110	104	436	222	93	84	1,770	—	104	104	—	—	—	—

NOTE :—* Includes Midwives also and 5 posts of Midwives were surrendered in 1959.
†Two temporary posts of Dais sanctioned during the year 1958 were withdrawn in 1959.
‡Date include figures for "Ante-natal" also.
§Information includes for "Number of deliveries conducted" also.
— Nil information.
+ Information not available.
♀ There are no Maternity and Child Welfare Centres functioning separately on this Railway.

Table No. 39

Anti-malarial activities carried out on different Railways in India during the years 1959 *and* 1958.

Railways	Powder (in lbs.)		Tablets		Injections		No. of anti-malaria units working		No. of anti-malaria surveys done		No. of houses sprayed		Quantity of DDT used (in lbs.)		No. of larvicidal operations	
	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958	1959	1958
1. Central . . .	20	38	270,531	305,104	10,917	10,419	29	29	—	—	33,182	19,995	10,059	5,658	52	52
2. Northern . .	89	63	191,822	182,899	7,787	6,578	47	47	3	—	83,806	65,077	25,396	4,474	6	6
3. Southern . .	45	52	27,547	27,101	2,208	4,774	7	6	—	—	23,468	10,600	13,069	5,729	—	—
4. Eastern . . .	—	—	44,000	5,243	—	—	16*	18	35	36	37,465	17,574	26,954	2,893	—	—
5. Western . .	84	134	279,700	529,000	11,950	32,240	36	33	—	—	45,560	35,873	11,914	7,823	—	—
6. South Eastern . .	12	7	98,300	114,258	160	135	28	37	1	1	87,977	23,300	48,690	9,491	—	—
7. North Eastern .	12	23	67,344	203,373	329	182	6	2	2	2	26,479	14,439	10,025	6,124	52	52
8. North East Frontier	41	24	39,807	574,005	681	1,392	22†	23	—	—	30,189	23,790	13,728	7,020	5	21
9. Chittaranjan Locomotive Works .	—	—	—	—	—	—	1	1	—	—	13,195	13,468	4,650	3,100	—	—

NOTE:—*The decrease is due to the implementation of the National Malaria Eradication Programme having 55 railway settlements coming under the purview of the said programme.

†One Anti-Malaria Unit was abolished at Tanjla during the year 1959.

—Nil information.

Table No. 40

Cases and deaths due to certain causes of sickness recorded in hospitals on different Railways in India during the years 1959 *and* 1958.

Diseases	Years	Central Railway		Northern Railway		Southern Railway		Eastern Railway		Western Railway		South Eastern Railway		North East Frontier Railway		North Eastern Railway		Chittaranjan Locomotive Works	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1. Cholera	1959	3	—	1	1	6	—	14	3	5	1	12	—	—	—	4	—	—	—
	1958	16	3	13	3	22	6	31	15	—	—	34	6	7	1	—	—	—	—
2. Small-pox	1959	171	3	220	10	229	7	35	2	287	—	187	12	8	—	30	1	4	1
	1958	769	26	608	20	365	33	240	20	807	16	362	27	19	1	262	11	7	—
3. Plague	1959	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1958	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Dysentery & Diarrhoea	1959	81,752	25	159,858	22	120,664	30	83,454	6	108,791	7	115,224	10	118,778	9	46,140	1	9,623	15
	1958	75,755	34	129,978	22	127,489	18	73,470	12	96,429	6	111,544	17	76,632	17	40,641	7	5,497	10
5. Malaria	1959	23,706	—	29,631	3	2,473	1	102	—	56,320	3	554	—	1,861	12	3,143	—	29	—
	1958	32,049	2	38,251	1	3,358	13	685	—	70,234	7	1,911	1	3,146	11	6,318	1	9	—
6. Enteric Fever	1959	948	29	3,224	55	783	7	2,792	10	1,112	3	1,636	4	437	2	1,163	3	122	1
	1958	855	15	2,515	14	785	90	1,751	8	2,339	6	3,202	16	286	5	1,439	11	81	2
7. Other Fevers	1959	149,905	47	112,083	31	2,024,483	17	39,794	14	37,765	7	132,322	5	72,985	10	53,206	12	5,964	8
	1958	143,718	31	82,189	4	223,552	31	48,778	20	25,472	5	107,918	14	57,522	14	60,986	11	3,182	—
8. T. B.	1959	2,797	88	2,704	39	2,673	46	1,472	46	1,590	48	1,939	88	392	15	1,398	34	79	1
	1958	2,346	41	3,386	47	2,396	59	858	26	1,672	36	1,787	78	338	21	1,277	10	64	1
9. Leprosy	1959	55	—	27	1	254	1	58	2	33	1	37	—	15	—	59	—	11	—
	1958	77	1	29	1	316	—	56	3	24	—	45	—	17	—	29	1	5	—
10. Injuries	1959	57,475	52	106,977	14	140,274	19	47,045	17	110,357	13	61,810	9	22,220	11	21,168	—	2,167	1
	1958	52,980	43	101,186	32	134,164	8	60,389	13	96,626	21	50,720	7	29,647	2	30,403	12	658	—
11. Other causes	1959	438,907	209	1,262,712	212	976,016	276	439,678	100	957,894	166	620,120	37	357,083	74	376,853	106	63,045	41
	1958	392,146	312	1,080,214	92	1,054,367	245	454,344	88	809,787	176	596,053	60	359,227	78	282,931	136	64,869	47
TOTAL	1959	755,718	454	1,677,437	388	1,445,855	404	614,444	200	1,274,154	249	933,841	165	537,179	133	503,164	157	81,044	68
	1958	700,711	508	1,438,369	236	1,546,814	503	640,602	205	1,103,390	273	873,576	226	526,841	150	424,286	200	74,372	60

NOTE :— — Nil information.

Table No. 41

Immunisation statistics recorded on different Railways in India during the years 1959 *and* 1958.

Railways	Years	Anti-Cholera inoculations	Smallpox Vaccinations performed			Anti-plague inoculations	Anti-typhoid inoculations	Others
			Primary	Revaccinations	Total			
1. Central	1959	25,441	9,586	51,921	60,685	—	1,750	210
	1958	66,232	11,041	79,756	90,797	—	6,116	55
2. Northern	1959	6,886	6,391	30,643	37,034	4	3,153	1,324
	1958	20,373	6,808	47,193	54,001	17	2,246	1,088
3. Southern	1959	9,122	8,724	39,405	48,129	426	2,672	230
	1958	22,965	6,897	43,559	50,456	—	6,205	1,113
4. Eastern	1959	21,106	4,209	1,03,033	1,07,242	—	16,536	16,532
	1958	34,273	6,327	1,16,383	1,22,710	—	13,734	3,977
5. Western	1959	20,778	4,838	8,068	12,906	—	1,081	28
	1958	2,020	4,302	10,248	14,550	—	522	1,495
6. South Eastern	1959	31,389	9,951	1,72,578	1,82,529	—	8,452	291
	1958	42,552	14,663	1,70,283	1,84,946	205	8,846	303
7. North Eastern	1959	12,160	5,230	26,364	31,594	—	3,856	1,313
	1958	15,234	2,298	33,975	36,273	—	371	—
8. North East Frontier	1959	22,272	8,572	1,01,014	1,09,586	—	13,707	718
	1958	25,487	10,503	81,198	97,701	—	28,487	—
9. Chittaranjan Locomotive Works	1959	168	727	11,182	11,909	—	339	5,006
	1958	15	353	5,775	6,128	—	147	172

NOTE :— — Nil information.

Table No. 42

Annual expenditure incurred by different Railways in India on Medical and Public Health Services during the fiscal years 1959-60 *and* 1958-59

Railways	Medical		Public Health		Total	
	1959-60	1958-59	1959-60	1958-59	1959-60	1958-59
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Central	4,894,955	4,429,644	4,258,041	3,993,001	9,152,996	8,422,645
2. Northern	5,528,763	5,115,396	5,322,538	5,117,245	10,851,301	10,232,641
3. Southern	4,544,000	4,231,000	2,668,000	2,662,000	7,212,000	6,893,000
4. Eastern	5,138,000	4,375,000	4,069,000	3,792,000	9,207,000	8,167,000
5. Western	4,628,000	4,275,000	2,499,000	2,366,000	7,127,000	6,641,000
6. South Eastern	3,407,000	2,946,400	3,036,000	3,064,500	6,443,000	6,010,900
7. North Eastern	2,635,000	2,090,000	2,272,000	2,026,000	4,907,000	4,116,000
8. North East Frontier	2,687,000	2,446,000	2,733,000	2,881,000	5,420,000	5,327,000
9. Chittaranjan Locomotive Works	533,000	507,300	280,000	162,000	813,000	669,300

Table No. 43

Number of hospitals, dispensaries, beds and patients treated in different States/Union Territories of India during the year 1959.

States/Union Territories	Hospitals			Dispensaries			Total Medical Institutions *i.e.* hospitals and dispensaries combined	Beds			Number of patients treated	
	Rural	Urban	Total	Rural	Urban	Total		Rural	Urban	Total	Indoor (in' 000)	Out-door (in' 000)
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Andhra Pradesh** . . .	58	131	189	171	185	356	545	3,390	9,226	12.616	§1,128	14,518
2. Assam	16	41	57	465	70	535	592	447	1,953	2,400	+	+
3. Bihar**	142	77	219	632	79	711	930	1,404	3,575	4,979	591	4,551
4. Bombay**	74	179	253	576	394	970	1,223	10,208	15,509	25,717	+	+
5. Jammu and Kashmir . . .	11	13	24	112	11	123	147	1,209	1,420	2,629	18	3,476
6. Kerala	35	38	73	304	13	317	390	+	+	12,810	478	10,148
7. Madhya Pradesh	237	220	457	435	67	502	959	3,709	9,429	13,138	373	14,599
8. Madras	171	128	299	494	78	572	871	+	+	21,211	958	23,981
9. Mysore	94	84	178	644*	73*	717*	895	3,629	9,538	13,167	394	13,909
10. Orissa	111	53	164	280	15	295	459	1,199	2,339	3,538	119	5,370
11. Punjab	126	186	312	362	136	643@	810	2,406	9,851	12,257	288	10,499
12. Rajasthan	117	206	323	271	150	421@@	744	1,256	8,354	9,610	188	9,943

Table No. 43

Number of hospitals, dispensaries, beds and patients treated in different States/Union Territories of India during the year 1959—(Concld.)

1	2	3	4	5	6	7	8	9	10	11	12	13
13. Uttar Pradesh	105	311	416	738	174	912	1,328	5,813	13,115	18,928	507	18,440
14. West Bengal	95	184	279	1,446*	343*	1,789*	2,068	9,942	16,807	26,749	+	+
15. Andaman and Nicobar Islands	6	1	7	25	4	29	36	190	218	408	12	145
16. Delhi	3	29	32	11	55	66	98	94	4,700	4,794	362	6,603
17. Himachal Pradesh	10	12	22	71	6	77	99	386	857	1,243	248	1,509
18. Laccadive, Minicoy and Amindive Islands	—	—	—	7	—	7	7	—	—	—	—	92
19. Manipur	12	5	17	65	1	66	83	130	304	434	4	536
20. Pondicherry	1	4	5	29	5	34	39	52	712	764	17	640
21. Tripura	—	6	6	87	9	96	102	46	223	269	125	947
TOTAL	1,424	1,908	3,332	7,225	1,868	9,238	12,425	45,510	108,130	187,661	5,810	139,906

NOTE :—

* Including Primary Health Centres, Mobile Units and Clinics.

** Incomplete information.

@ Including 145 Primary Health Centres.

@@ Including 141 Primary Health Centres.

\+ Information not available.

— Nil information.

Table No. 44

Month-wise total and daily average attendances at the various Contributory Health Service Scheme Dispensaries during the year 1959.

Dispensaries	January		February		March		April		May		June	
	Total attendance	Daily average attendance	Total attendance	Daily average attendance	Total attendance	Daily average attendance	Total attendance	Daily average attendance	Total attendance	Daily average attendance	Total attendance	Daily average attendance
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Sarojini Nagar I	13,066	523	15,927	664	17,224	689	17,878	744	17,849	686	15,065	603
2. Sarojini Nagar II	12,925	517	13,709	571	15,714	629	15,958	665	17,917	689	14,065	563
3. Netaji Nagar	7,903	316	9,877	412	10,011	400	11,826	493	11,933	459	10,189	408
4. Moti Bagh I	11,408	456	12,995	541	13,686	547	15,115	630	14,852	571	16,944	678
5. Chanakya Puri	2,055	82	2,096	87	2,225	89	2,053	86	2,014	77	1,727	69
6. Lakshmibai Nagar	13,040	522	15,046	627	16,157	646	17,291	720	15,824	609	14,317	573
7. Kidwai Nagar	10,388	416	13,704	571	14,043	562	15,747	656	14,892	573	14,215	569
8. Lajpat Nagar	16,528	561	18,859	786	17,979	719	18,973	791	20,944	807	18,482	730
9. Kasturba Nagar	9,318	373	9,653	402	9,529	381	1,260	427	10,479	403	10,998	440
10. Lodi Road I	8,222	329	9,710	405	9,974	399	10,707	446	10,504	404	9,711	388
11. Lodi Road II	8,821	353	9,366	390	10,329	417	10,573	441	10,329	398	9,501	380
12. Pandara Road	6,722	259	7,630	318	8,238	330	8,969	374	8,493	327	7,755	310
13. Central Secretariat	9,489	380	11,305	471	13,104	524	11,576	482	9,935	382	9,719	384
14. Gole Market	10,635	425	13,438	560	14,238	560	14,236	593	14,704	566	15,036	601

Table No. 44

Month-wise total and daily average attendances at the various Contributory Health Service Scheme Dispensaries during the year 1959.—(Contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13
15. Pahar Ganj	10,573	423	12,630	527	13,747	550	13,729	572	15,735	605	12,740	510
16. Minto Road	12,669	507	14,130	589	5,313	613	15,568	649	14,404	554	13,600	544
17. Chandni Chowk	16,389	656	19,327	805	18,696	748	19,096	787	18,591	715	18,523	74
18. Subzimandi	10,165	407	11,189	470	12,123	485	12,160	507	11,980	461	11,194	448
19. Timarpur	8,381	355	8,952	373	9,998	400	10,725	447	10,287	396	10,023	401
20. Pul Bangash	10,113	405	9,849	410	9,867	395	10,149	423	10,576	407	11,308	452
21. Dev Nagar	9,495	380	11,295	471	11,108	444	11,952	498	12,269	472	10,941	438
22. Karol Bagh	8,341	334	9,328	389	9,960	398	10,048	419	10,403	400	11,094	444
23. Pusa Road	10,284	412	12,148	506	12,755	510	13,182	549	13,360	514	11,693	468
24. Patel Nagar	15,698	628	13,392	558	15,672	627	19,526	814	19,481	749	17,454	698
25. Tilak Nagar	4,325	173	5,196	247	6,273	251	5,087	242	6,083	234	6,288	252
26. Delhi Cantt.	965	39	1,182	49	1,283	51	1,238	52	1,218	47	1,241	50
27. President Estates@	—	—	—	—	1,716	69	2,461	103	2,833	109	2,741	150
28. Moti Bagh II@	—	—	—	—	—	—	—	—	—	—	—	—
29. Darya Ganj@	—	—	—	—	—	—	—	—	—	—	—	—
30. Nauroji Nagar@	—	—	—	—	—	—	—	—	—	—	—	—
31. Constitution House@	—	—	—	—	—	—	—	—	—	—	—	—
32. North Avenue@	—	—	—	—	—	—	—	—	—	—	—	—
33. South Avenue@	—	—	—	—	—	—	—	—	—	—	—	—
34. Telegraph Lane*	—	—	—	—	—	—	—	—	—	—	—	—

NOTE:—@ Figures shown against these dispensaries indicate the months in which these were opened during the year 1959.

—Nil information.

* This dispensary was opened on 31-12-1959.

Table No. 44

Month-wise total and daily average attendances at the various Contributory Health Service Scheme Dispensaries during the year 1959—(Contd.)

Dispensaries	July		August		September		October		November		December		Daily average attendance during the year
	Total attendance	Daily average attendance	Total attendance	Daily average attendance	Total attendance	Daily average attendance	Total attendance	Daily average attendance	Total attendance	Daily average attendance	Total attendance	Daily average attendance	
1	14	15	16	17	18	19	20	21	22	23	24	25	26
1. Sarojini Nagar I	20,064	772	20,718	863	18,439	709	15,394	641	17,045	682	12,992	500	672
2. Sarojini Nagar II	20,737	798	18,027	751	15,055	579	13,202	550	12,814	513	13,142	505	611
3. Netaji Nagar	12,573	484	13,324	555	14,409	554	11,983	499	10,620	425	11,043	425	452
4. Moti Bagh I	13,485	519	14,346	598	14,270	549	12,069	503	11,404	456	10,722	412	538
5. Chanakya Puri	2,543	98	21,733	906	22,717	874	18,040	752	15,968	639	16,389	630	684
6. Lakshmibai Nagar	18,834	724	2,754	115	2,581	99	2,607	109	2,267	91	2,354	91	91
7. Kidwai Nagar	16,696	642	16,335	681	17,517	674	13,419	559	13,533	541	13,512	520	580
8. Lajpat Nagar	19,297	742	21,225	886	22,391	861	19,389	808	16,593	664	17,769	683	762
9. Kasturba Nagar	14,210	547	14,849	619	15,816	608	13,063	544	11,394	456	12,168	468	472
10. Lodi Road I	12,321	474	13,085	545	13,740	528	11,724	484	10,764	431	10,132	390	435
11. Lodi Road II	10,614	408	12,576	524	12,572	484	10,154	423	9,253	370	10,205	392	414
12. Pandara Road	10,027	386	10,070	420	10,587	407	10,178	424	9,074	363	8,967	345	356
13. Central Secretariat	11,792	454	10,235	426	12,034	463	12,933	539	8,641	346	9,298	358	434
14. Gole Market	14,031	540	20,438	852	19,624	755	20,936	872	16,025	645	12,654	487	620
15. Pahar Ganj	15,340	590	15,483	645	15,855	610	13,614	567	12,789	512	13,079	503	551

Table No. 44

Month-wise total and daily average attendances at the various Contributory Health Service Scheme Dispensaries during the year 1959—(Concld.)

1	14	15	16	17	18	19	20	21	22	23	24	25	26
16. Minto Road . . .	17,221	622	19,166	799	18,982	730	17,320	722	15,097	604	13,543	521	623
17. Chandni Chowk . .	17,316	704	17,799	742	16,085	619	16,930	705	15,070	603	15,228	585	700
18. Subzimandi . . .	13,376	514	13,924	580	14,146	344	12,434	518	11,503	460	11,260	433	485
19. Timarpur . . .	11,429	440	11,937	497	12,226	470	9,840	410	9,344	374	8,479	326	405
20. Pul Bangash . . .	14,132	544	13,116	547	13,360	514	11,857	494	11,629	465	11,731	451	458
21. Dev Nagar . . .	13,244	516	15,177	632	15,735	605	12,467	519	11,863	475	12,558	483	494
22. Karol Bagh . . .	13,829	532	14,156	590	14,435	555	11,755	490	11,686	467	11,824	455	456
23. Pusa Road . . .	14,498	558	16,479	687	16,169	622	13,490	562	11,522	461	11,985	461	525
24. Patel Nagar . . .	19,964	768	22,902	954	21,013	808	17,930	747	17,314	693	20,247	779	735
25. Tilak Nagar . . .	7,267	279	8,250	344	8,112	312	6,927	284	7,055	282	12,187	469	282
26. Delhi Cantt . . .	1,389	53	1,646	69	1,537	59	1,419	59	1,126	45	933	36	51
27. President Estates . .	2,846	109	3,282	137	3,427	132	385	129	2,999	120	2,909	112	113
28. Moti Bagh II . . .	9,132	415	15,066	628	12,736	490	10,728	447	10,173	407	9,953	383	461
29. Darya Ganj . . .	6,649	302	7,905	608	16,616	639	12,995	541	12,790	512	12,286	473	549
30. Nauroji Nagar@ . .	—	—	8,175	341	8,929	343	7,444	310	6,948	278	7,198	277	308
31. Constitution House@ .	—	—	—	—	—	—	—	—	257	19	1,199	46	37
32. North Avenue@ . .	—	—	—	—	—	—	—	—	443	34	1,537	59	51
33. South Avenue@ . .	—	—	—	—	—	—	—	—	444	34	1,211	47	42
34. Telegraph Lane* . .	—	—	—	—	—	—	—	—	—	—	—	—	—

NOTE :—@ Figures shown against these dispensaries indicate the months in which they were opened during the year 1959.

* This dispensary was opened on 31-12-1959.

— Nil information.

Table No. 45

Month-wise patients treated due to some important causes of sickness at the various Contributory Health Service Scheme Dispensaries during the year 1959.

Months	Tuberculosis		Typhoid (Enteric group) Fever	Diphtheria	Whooping Cough	Measles	Mumps	Malaria	Filariasis ankylostomiasis and other helminths	Malignant neoplasms (all sites)	Benign neoplasms (all sites)	Diabetes	Avitaminosis and other deficiency diseases	Anaemias
	Respiratory	Others												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. January . .	118	38	52	4	542	13	170	28	365	141	210	121	4,399	1,845
2. February . .	123	43	44	3	506	21	236	14	395	88	108	91	4,204	1,366
3. March . . .	160	65	62	40	624	41	348	20	511	101	95	108	4,243	1,731
4. April . . .	223	113	161	5	743	58	372	19	495	344	148	88	4,264	1,597
5. May . . .	210	78	301	3	488	80	404	35	399	73	17	108	4,192	1,927
6. June . . .	189	80	242	7	296	46	280	36	300	62	4	70	3,659	1,635
7. July	189	84	260	10	182	14	228	69	326	40	6	106	4,517	1,194
8. August . .	191	95	207	4	110	21	146	152	309	27	4	80	5,191	1,932
9. September . .	125	117	356	9	128	15	149	71	478	20	3	94	4,998	1,901
10. October . .	124	96	275	12	201	20	166	33	401	544	3	63	4,626	1,607
11. November . .	88	93	135	20	168	17	179	40	418	46	6	116	4,097	1,392
12. December . .	88	138	233	5	230	18	310	24	327	78	5	137	4,054	1,484
TOTAL . .	1,828	1,040	2,328	122	4,218	364	2,988	541	4,724	1,564	609	1,182	52,444	19,611
Incidence rates per mille of beneficiaries .	4·10	2·28	5·11	0·27	9·25	0·80	6·55	1·19	10·36	3·43	1·34	2·59	115·06	43·03

Table No. 45

Month-wise patients treated due to some important causes of sickness at various Contributory Health Service Scheme Dispensaries during the year 1959—(Contd.)

Months	Asthma	Allergic disorders and metabolic and blood diseases	Mental diseases	Diseases of eye		Otitis media and mastoiditis	Hypertension		Diseases of the Respiratory System					
				Trachoma	Others		With heart disease	Without heart disease	Acute upper respiratory infections	Influenza	Acute bronchitis	Chronic bronchitis	Hypertrophy of tonsils	Other respiratory
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1. January . .	551	1,320	7	722	2,804	1,855	30	224	15,808	55	2,569	2,143	2,683	2,695
2. February . .	483	1,419	50	714	2,597	1,797	50	141	19,377	154	2,171	2,414	2,764	2,617
3. March . .	445	1,670	9	793	3,061	1,732	4	271	16,298	119	2,690	1,997	1,997	2,550
4. April . . .	522	1,804	12	990	3,416	1,674	17	301	14,802	142	2,180	1,582	2,598	2,906
5. May . . .	567	1,803	6	855	4,320	1,581	2	274	15,893	182	1,742	2,006	2,928	2,586
6. June . .	381	1,652	4	828	3,597	1,536	15	130	11,458	286	1,358	1,931	2,609	1,979
7. July . . .	499	2,447	6	949	4,461	2,140	4	155	15,555	243	1,758	1,954	2,736	2,439
8. August . .	583	2,143	8	1,055	5,312	2,450	16	156	15,458	104	1,627	2,564	3,071	2,563
9. September . .	453	2,001	14	1,334	5,766	2,492	26	187	13,620	55	1,923	2,330	2,481	2,121
10. October . .	559	1,656	30	970	3,918	1,999	17	174	17,468	79	1,550	2,593	2,803	2,464
11. November . .	568	1,773	13	820	5,105	1,725	11	225	17,594	96	1,907	2,646	2,497	2,000
12. December . .	576	1,591	30	981	3,279	2,101	25	228	23,217	188	2,247	2,448	2,190	2,425
TOTAL .	6,187	21,279	189	11,011	47,636	23,082	217	2,466	196,548	1,703	23,722	26,608	31,366	29,345
Incidence rates per mille of beneficiaries	13·57	46·69	0·41	24·16	104·51	50·64	0·48	5·41	431·23	3·74	52·05	58·38	68·82	64·38

Table No. 45

Month-wise patients treated due to some important causes of sickness at various Contributory Health Service Scheme Dispensaries during the year 1959—(Contd.)

Months	Strepto-coccal sore throat	Diseases of the digestive system				Diseases of liver		Diseases of genito-urinary system	Pregnancy
		Teeth and gums	Gastro-enteritis and colitis	Dysentery (all forms)	Others	Infective hepatitis	Others (including cirrhosis, Cholelithiasis etc.)		
1	30	31	32	33	34	35	36	37	38
1. January	2,438	2,732	1,412	2,935	6,655	51	1	1,977	2,178
2. February	2,907	2,641	1,291	3,022	5,802	36	1	2,022	2,041
3. March	2,547	2,829	2,170	3,570	7,379	35	6	1,824	2,162
4. April	2,764	3,071	3,538	5,014	8,592	40	—	2,039	2,424
5. May	2,741	3,292	2,241	4,136	8,256	50	2	1,718	2,526
6. June	2,263	2,822	2,084	4,104	7,327	40	—	1,828	2,434
7. July	2,567	3,434	1,711	4,736	10,879	75	—	2,219	3,152
8. August	2,644	3,409	3,136	6,250	11,265	73	1	1,977	3,373
9. September	2,506	3,713	2,507	5,844	9,207	96	1	2,216	3,336
10. October	2,612	3,303	2,019	4,721	7,507	75	1	1,702	2,685
11. November	2,524	2,874	1,596	4,166	7,093	67	3	1,666	2,397
12. December	2,917	3,349	1,441	3,509	7,074	59	2	1,795	2,978
TOTAL	31,430	37,460	25,146	52,007	97,054	697	18	22,983	31,686
Incidence Rates per mille of beneficiaries	68·96	82·21	55·17	114·10	212·94	1·53	0·04	50·42	347·66*

NOTE: —*Incidence Rate calculated per mille of married women covered under the Scheme.

— Nil information.

Table No. 45

Month-wise patients treated due to some important causes of sickness at various Contributory Health Service Scheme Dispensaries during the year 1959—(Concld.)

Months	Complications of pregnancy child-birth and puerperium	Diseases of skin and musculo skeletal system				Accidents, poisoning and violence			
		Scabies	Infection of skin	Rheumatism, muscular and others	Others	Fractures, dislocations, sprains and strains	Injuries	Wounds	Other
1	39	40	41	42	43	44	45	46	47
1. January	478	240	4,543	2,220	3,054	280	2,881	1,485	507
2. February	604	255	4,224	2,296	3,126	393	3,360	192	617
3. March	327	386	4,655	2,563	3,690	365	3,678	1,994	845
4. April	793	336	4,749	2,727	3,876	337	3,888	2,052	683
5. May	745	328	4,515	2,600	3,049	305	3,676	2,241	643
6. June	719	177	6,571	2,602	4,108	524	3,713	2,545	650
7. July	1,070	559	9,654	3,152	6,478	570	4,581	3,178	858
8. August	890	380	10,686	3,127	7,466	459	2,699	5,380	864
9. September	712	358	8,726	3,342	7,575	363	5,573	2,700	625
10. October	763	262	7,600	2,473	5,471	367	4,765	2,743	912
11. November	738	272	6,263	2,044	4,820	260	4,506	2,446	859
12. December	809	313	5,320	2,196	5,525	302	2,251	3,834	613
TOTAL	8,648	3,866	77,511	31,342	58,238	4,526	45,271	30,790	8,669
Incidence Rates per mille of beneficiaries	272·93*	8·48	170·06	68·76	127·77	9·93	99·32	67·55	19·00

NOTE :—*Incidence Rate calculated per mille of deliveries.

Table No. 46

Statistics of the work done at various Family Planning Centres functioning under the Contributory Health Service Scheme during the year 1959.

Months	Persons contacted	No. of cases given advice	No. of active cases following family planning methods	Attendance at the Family Planning Centres	Home visits		Cases referred for sterilisation	Meetings held		Cost of contraceptives sold (in Rs.)
					New contacts	Follow up cases		Number	Attendance	
1. January	3,154	322	415	1,299	1,576	774	30	70	1,241	735
2. February	2,737	380	400	1,358	1,097	642	28	64	1,764	930
3. March	1,727	502	476	1,814	1,363	1,011	67	101	2,624	1,118
4. April	2,446	440	417	1,439	1,270	983	35	71	2,937	929
5. May	2,898	359	406	1,358	1,547	1,108	30	64	1,837	865
6. June	1,605	338	395	1,362	868	720	37	40	3,328	910
7. July	4,437	337	323	1,574	1,186	863	27	36	3,883	1,123
8. August	6,589	319	371	1,582	1,350	1,139	44	92	6,362	1,404
9. September	6,534	456	617	2,074	1,554	1,327	43	84	3,153	1,725
10. October	4,425	301	427	1,596	1,436	1,340	35	78	8,087	1,294
11. November	11,308	189	236	1,169	369	1,066	23	66	7,078	1,271
12. December	23,251	207	251	1,221	3,397	449	20	58	24,681	1,165
TOTAL	71,111	4,150	4,734	17,846	17,013	11,422	419	824	66,975	13,469

Table No. 47

Number of Blood Banks, Donors etc., in various States of India during the year 1959.

States/Union Territories	No. of Blood Banks	No. of Donors	Quantity of blood collected (in C.C.)	No. of blood transfusions	No. of Blood Banks having facilities for preparation of plasma	Total quantity of plasma/serum prepared (in C.C.)
1. Andhra Pradesh	19	11,721	43,94,425	13,194	—	—
2. Bihar	5	1,873	5,50,150	1,697	—	10,105
3. Bombay	12	13,912	51,99,615	14,069	—	4,600
4. Jammu and Kashmir	2	274	1,16,000	278	—	—
5. Kerala	5	2,670	6,23,400	2,644	—	—
6. Madras	22	21,771	53,83,649	18,350	—	10,23,950
7. Mysore	3	2,351	9,40,455	2,527	—	—
8. Orissa	3	1,178	2,95,000	4,67,750	—	—
9. Punjab	4	8,110	26,20,130	7,829	1	19,435
10. Rajasthan	5	3,613	10,55,470	3,344	1	—
11. Uttar Pradesh	3	4,476	13,91,925	4,576	—	3,118
12. West Bengal	6	32,136	80,89,530	13,668	1	92,025
13. Delhi	4	10,618	35,77,100	10,631	—	5,000
14. Himachal Pradesh	1	70	18,830	58	—	—
15. Manipur	1	1,200	8,000	294	—	—
16. Pondicherry	—	—	—	—	—	—
17. Tripura	—	—	—	—	—	—
TOTAL	95	1,15,973	34,263,679	5,60,909	3	1,158,233

NOTE:— — Nil information.

Table No. 48

Number of institutions having X-ray facilities, cases examined and treated in various States of India during the year 1959.

States/Union Territories	No. of institutions having X-ray facilities	No. of cases examined	No. of cases treated
1. Andhra Pradesh	21	1,45,104	10,676
2. Assam*	24	32,523	3,549
3. Bihar	36	57,924	1,16,080
4. Bombay	82	4,39,015	1,55,168
5. Mysore	37	2,63,782	1,14,518
6. Orissa	20	23,572	735
7. Punjab	58	1,21,120	29,871
8. Rajasthan	47	1,52,346	11,481
9. Uttar Pradesh	90	2,45,219	2,22,823
10. West Bengal	36	1,85,296	26,405
11. Andaman and Nicobar Islands	1	453	+
12. Himachal Pradesh	7	13,046	718
13. Pondicherry	—	—	—

NOTE :—* Figures relate to the year 1957.
+ Figures not available.
— Nil information.

Table No. 49

Number of institutions having radium facilities and quantity of radium available (in mg.) etc., in various States of India during the year 1959.

States/Union Territories	Number of institutions having radium facilities	Quantity of radium available (in mg.)	Number of patients treated	Number of institutions having isotope facilities	Number of patients	
					Diagnosed	Treated
1. Andhra Pradesh .	2	788	763	1	1,299	1,186
2. Bihar . . .	1	+	+	2	20	20
3. Bombay . .	7	835	770	+	+	+
4. Mysore . .	4	1013·13	829	1	+	+
5. Orissa . .	1	+	+	+	+	+
6. Punjab . .	3	300	260	1	80	80
7. Rajasthan . .	1	140	36	—	—	—
8. Uttar Pradesh .	2	400	2,018	1	+	+
9. Himachal Pradesh	1	227	78	—	—	—

NOTE:— + Information not available.
— Nil information.

Table No. 50

Mental Hospitals in various States/Union Territories of India during the year 1959.

States/Union Territories	Mental Hospitals	Beds	Number of patients at the end of the year
1. Andhra Pradesh	2	900	1,202
2. Assam	1	795	770
3. Bihar	2	1,833	1,862
4. Bombay	9	3,129	6,194
5. Jammu and Kashmir	1	50	51
6. Kerala	3	722	1,643
7. Madhya Pradesh	2	195	336
8. Madras	1	1,800	2,539
9. Mysore	2	759	953
10. Orissa	—	—	—
11. Punjab	1	600	799
12. Rajasthan	2	240	255
13. Uttar Pradesh	3	1,407	1,223
14. West Bengal	4	365	279
15. Andaman and Nicobar Islands	—	—	—
16. Delhi	—	—	—
17. Himachal Pradesh	—	—	—
18. Manipur	—	—	—
19. Pondicherry	—	—	—
20. Tripura	—	—	—
TOTAL	33	12,795	19,106

NOTE:— — Nil information.

Table No. 51

Amount sanctioned towards family planning activities to State Governments, Local Bodies and Voluntary Organisations in India during the years 1957, 1958 *and* 1959.

States/Union Territories	Amount (in Rs.) sanctioned during 1957				Amount (in Rs.) sanctioned during 1958				Amount (in Rs.) sanctioned during 1959			
	State Govts.	Local Bodies	Vol. Orgns.	Total	State Govts.	Local Bodies	Vol. Orgns.	Total	State Govts.	Local Bodies	Vol. Orgns.	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Andhra Pradesh.	90,621	—	14,030	104,651	—	—	—	—	62,104	—	38,849	100,953
2. Assam .	91,500	—	25,696	117,196	5,268	—	5,780	11,048	125,571	—	—	125,571
3. Bihar .	38,442	—	2,000	40,442	—	—	10,750	10,750	118,710	11,864	3,210	133,784
4. Bombay .	71,240	56,261	822,741	950,242	—	56,477	423,288	479,765	153,644	47,401	790,327	991,372
5. Jammu and Kashmir	—	—	—	—	—	—	—	—	21,300	—	—	21,300
6. Kerala .	—	—	39,596	39,596	—	—	33,444	33,444	81,727	—	38,208	119,935
7. Madhya Pradesh.	7,000	—	1,500	8,500	—	—	19,603	19,603	80,388	—	28,016	108,404
8. Madras .	31,530	—	22,167	66,031	4,809	—	91,712	96,521	181,952	—	27,374	209,326
9. Mysore .	49,248	—	20,940	70,180	4,204	—	22,645	26,849	26,909	—	44,317	71,226
10. Orissa .	—	—	—	—	—	—	—	—	128,279	—	—	128,279
11. Punjab .	65,782	—	87,513	153,295	5,585	—	23,000	28,585	63,758	—	153,521	217,279
12. Rajasthan	155,180	—	13,089	168,269	—	—	—	—	40,540	—	10,225	50,729

Table No. 51

Amount sanctioned towards family planning activities to State Governments, Local Bodies and Voluntary Organisations in India during the years 1957, 1958 *and* 1959—(Concld.)

1	2	3	4	5	6	7	8	9	10	11	12	13
13. Uttar Pradesh	600	—	133,777	134,377	—	—	19,290	19,290	102,249	14,038	77,046	193,333
14. West Bengal	—	10,100	161,020	171,130	70,597	4,175	79,484	154,256	120,984	4,820	51,442	177,246
15. Delhi . .	—	94,900	27,600	122,500	—	—	187,760	187,760	—	—	81,549	18,549
16. Himachal Pradesh.	—	—	—	—	—	—	—	—	—	—	—	—
17. Manipur .	—	—	7,750	7,750	—	—	—	—	—	—	—	—
18. Pondicherry .	—	—	—	—	—	—	—	—	—	—	—	—
19. Tripura .	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL .	601,143	173,595	1,379,419	2,154,157	90,463	60,652	907,756	1,058,871	1,308,079	78,123	1,344,084	2,730,286

NOTE:—These figures do not include the expenditure on Family Planning Clinics attached to the contributory Health Service Scheme, Training Centres at Bombay, Ramanagram and Delhi and on Central Organisations. The figures on expenditure under State Governments for 1959 include the amount adjusted against lump sum ways and means for the year 1958-59.

Table No. 52

Family Planning Centres opened in various States of India during the First and Second Five Year Plans upto the end of 1959.

States/Union Territories	Family Planning Clinics opened during the First Five Year Plan period from 1951-56		Family Planning Clinics opened during the Second Five Year Plan period (1956-61)								Total	
			1956		1957		1958		1959			
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Andhra Pradesh	—	8	—	—	1	7	86	—	4	18	91	25
2. Assam . .	—	1	—	—	35	8	1	—	11	2	47	10
3. Bihar . .	—	20	—	—	—	—	22	6	—	1	22	7
4. Bombay . .	—	10	—	—	43	16	6	12	107	27	156	55
5. Jammu and Kashmir.	—	—	—	—	—	—	—	2	—	—	—	2
6. Kerala . .	11	1	10	4	10	—	4	8	12	1	36	13
7. Madhya Pradesh	—	7	—	—	—	2	67	22	21	10	88	34
8. Madras . .	2	16	—	—	63	11	2	—	6	4	71	15
9. Mysore . .	—	6	—	1	5	5	7	6	19	4	31	16
10. Orissa . .	—	3	—	1	—	3	25	21	15	2	40	27
11. Punjab . .	—	1	—	—	2	1	12	9	4	4	18	14

Table No. 52

Family Planning Centres opened in various States of India during the First and Second Five Year Plans upto the end of 1959—(Concld.)

1	2	3	4	5	6	7	8	9	10	11	12	13
12. Rajasthan . .	—	6	—	—	25	7	—	—	16	9	41	16
13. Uttar Pradesh .	—	9	—	—	—	6	35	8	20	3	55	17
14. West Bengal . .	7	13	—	—	10	18	2	1	15	24	27	43
15. Delhi . .	—	18	—	—	—	8	—	5	—	1	—	14
16. Himachal Pradesh	—	5	—	—	—	2	—	—	—	1	—	3
17. Manipur . .	—	—	—	—	—	—	—	2	—	—	—	2
18. Tripura . .	—	1	—	—	—	—	—	—	—	—	—	—
19. Pondicherry .	—	—	—	—	—	1	—	—	—	—	—	1
TOTAL . .	20	125	10	6	194	95	269	102	250	111	723	314

NOTE:— — Nil information.

Table No. 53

Maternity and Child Health Centres in various States of India during the year 1959.

States/Union Territories	No. of Centres maintained by						Total		
	Government		Local and Municipal Bodies		Other Agencies				
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Total
1	2	3	4	5	6	7	8	9	10
1. Andhra Pradesh	461	69	130	81	51	66	642	216	858
2. Assam	+	+	+	+	+	+	+	+	100
3. Bihar	6	66	+	+	+	33	6	99	105
4. Bombay@	131	52	12	50	9	113	152	215	367
5. Kerala	396	1	24	40	12	+	432	41	473
6. Madhya Pradesh	114	57	1	16	4	1	119	74	193
7. Madras	975	+	322	254	177	31	1,474	285	1,759
8. Mysore	+	+	+	+	+	+	+	+	+
9. Orissa	17	18	2	5	15	5	34	28	68
10. Punjab	147	29	19	37	24	22	190	88	278
11. Rajasthan	+	+	+	+	+	+	+	+	204
12. Uttar Pradesh	+	+	+	+	+	+	+	+	1,148

Table No. 53

Maternity and Child Health Centres in various States of India during the year 1959—(Concld.)

1	2	3	4	5	6	7	8	9	10
13. West Bengal	+	+	+	+	+	+	+	+	+
14. Andaman and Nicobar Islands	+	1	+	+	+	+	+	1	1
15. Delhi††	+	+	30	45	+	+	30	45	75
16. Himachal Pradesh	26	8	+	1	+	+	26	9	35
17. Manipur	+	1	5	+	+	+	5	1	6
18. Pondicherry	3	+	+	+	+	+	3	+	3
19. Tripura	24	5	+	+	+	+	24	5	29
TOTAL	2,300	307	545	529	292	271	3,137	1,107	5,596

NOTE:—@ Incomplete Information.
+ Information not available.
†† Information relates only to Municipal Corporation of Delhi.

Table No. 54

Number of posts sanctioned and actual number of nursing personnel employed in various States/Union Territories of India during the year 1959.

States/Union Territories	Matrons		Assistant Matrons		Sister Tutors		Sisters		Staff Nurses		Midwives	
	Sanctioned	Actual	Sanctioned	Actual	Sanctioned	Actual	Sanctioned	Actual	Sanctioned	Actual	Sanctioned	Actual
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Andhra Pradesh	+	+	+	+	+	+	+	+	+	+	+	+
2. Assam . .	22	22	1	1	12	12	123	121	387	363	179	179
3. Bihar	+	+	+	+	+	+	+	+	+	+	+	+
4. Bombay . .	34	31	17	16	60	51	295	239	1,033	897	360	316
5. Jammu and Kashmir.	2	2	—	—	—	—	—	—	75	45	—	—
6. Kerala . .	—	—	—	—	—	—	—	—	1,016	916	—	—
7. Madhya Pradesh	16	12	8	8	49	37	129	112	1,079	985	888	664
8. Madras . .	20	17	48	44	85	59	267	235	2,009	1,912	1,072	975
9. Punjab . .	13	11	—	—	9	9	65	64	482	363	—	—
10. Rajasthan . .	9	9	8	8	30	30	75	75	441	441	700	700
11. Uttar Pradesh .	16	14	6	5	13	9	86	74	251	209	—	—
12. West Bengal .	42	33	30	8	39	32	277	151	1,349	1,079	160	160
13. Delhi . .	7	7	7	7	25	25	95	91	324	324	1	1

Table No. 54

Number of posts sanctioned and actual number of nursing personnel employed in various States/Union Territories of India during the year 1959—(Contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13
14. Himachal Pradesh	7	6	—	—	3	3	8	8	69	50	63	62
15. Laccadive Islands	—	—	—	—	—	—	—	—	—	—	8	8
16. Manipur . . .	1	1	—	—	—	—	4	3	31	20	48	48
17. Pondicherry . .	—	—	—	—	—	—	—	—	117	117	—	—
18. Tripura . .	2	1	—	—	1	1	3	2	126	85	36	13

NOTE:— — Nil information.
+ Information not available.

Table No. 54

Number of posts sanctioned and actual number of nursing personnel employed in various States/Union Territories of India during the year 1959—(Concld.)

States/Union Territories	Health Visitors		Public Health Nurses		Auxiliary Nurse Mid-wives		Nurse Dais		Trained Dais	
	Sanc-tioned	Actual	Sanc-tioned	Actual	Sanc-tioned	Actual	Sanc-tioned	Actual	Sanc-tioned	Actual
1	14	15	16	17	18	19	20	21	22	23
1. Andhra Pradesh	+	+	+	+	+	+	+	+	+	+
2. Assam	19	19	15	15	118	118	—	—	123	123
3. Bihar	+	+	+	+	+	+	+	+	+	+
4. Bombay	50	43	21	21	128	104	148	136	167	167
5. Jammu and Kashmir	—	—	—	—	—	—	—	—	—	—
6. Kerala	—	—	—	—	—	—	—	—	—	—
7. Madhya Pradesh	282	236	4	4	—	—	—	—	665	665
8. Madras	41	40	35	23	103	90	30	22	20	20
9. Punjab	248	248	9	3	263	146	312	300	322	322
10. Rajasthan	181	181	2	2	—	—	128	128	156	156
11. Uttar Pradesh	—	—	—	—	—	—	372	311	—	—
12. West Bengal	85	85	47	43	1,903	628	322	322	465	465
13. Delhi	6	6	6	6	22	17	21	21	—	—
14. Himachal Pradesh	55	41	7	3	29	19	38	36	14	14
15. Laccadive Islands.	—	—	—	—	—	—	—	—	—	—
16. Manipur	8	2	—	—	7	7	—	—	21	21
17. Pondicherry	6	4	—	—	—	—	—	—	—	—
18. Tripura	7	1	—	—	52	38	—	—	49	26

NOTE:—+Information not available,
—Nil information.

Table No. 55

Ratio of nursing personnel to beds/population in various States/Union Territories of India during the year 1959.

States/Union Territories	Ratio of nursing personnel to beds	Ratio of nursing personnel to population
1. Assam	1 : 3	1 : 70,000
2. Jammu and Kashmir	1 : 48	1 : 67,000
3. Kerala	1 : 29	1 : 15,000
4. Madhya Pradesh	1 : 14	1 : 11,832
5. Punjab	1 : 11	1 : 4,521
6. Rajasthan	1 : 5	1 : 10,000
7. Uttar Pradesh	1 : 11	1 : 41,618
8. West Bengal	1 : 21	1 : 3,473
9. Delhi	1 : 5	1 : 30,000
10. Himachal Pradesh	1 : 32	1 : 5,633
11. Manipur	1 : 9	1 : 12,000
12. Tripura	1 : 3	1 : 1,639

NOTE.—Information in respect of other States is not available.

Table No. 56

Scholarships/Fellowships granted by the International Agencies for studies abroad during the year 1959.

Name of Agency	Number of scholarships/fellowships granted
1. T.C.M.	2
2. W.H.O.	1
3. Colombo Plan	4
4. Rockfeller Foundation	2
TOTAL	9

Table No. 57

Number of Training Schools in Nursing, number of students admitted etc., in India during the year 1959.

I. Number of Training Schools in Nursing :

(i) Mid-wifery Tutor Course	1
(ii) B.Sc. (Nursing) Course	2
(iii) General Nursing Course	278
(iv) Auxiliary Nurse-Midwives Course	191
(v) Health Visitors Course	21
(vi) Midwifery Course	264

II. Number of Students admitted :

(i) B.Sc. (Nursing) Course	160
(ii) General Nursing Course	9,596
(iii) Mid-wifery Course	3,096
(iv) Auxiliary Nurse-Midwives Course	4,120
(v) Health Visitors Course	1,167

III. Number of Students qualified :

(i) B. Sc. (Nursing) Course	32
(ii) General Nursing Course	2,563
(iii) Mid-wifery Course	2,978
(iv) Auxiliary Nurse-Mid wives Course	955
(v) Health Visitors Course	362

IV. Nursing personnel registered upto 31-12-1959 *:*

(i) Nurses	30,400
(ii) Mid-wives	35,798
(iii) Auxiliary Nurse-Midwives	1,605
(iv) Health Visitors	1,321

V. Number of Post-certificate Institutions and students qualified during the year 1959 *:*

Courses	No. of Institutions	No. qualified
(i) Ward Sister's Course	2	74
(ii) Nursing Administration Course	2	18
(iii) Sister Tutors Course	4	42
(iv) Mid-wife Tutor Course	1	8
(v) Public Health Nursing Course	3	57
(vi) Psychiatric Nursing Course	1	17

Table No. 58

Number of students admitted to MBBS in various Medical Colleges of India during the year 1959.

States/Medical Colleges	Males	Females	Total
I. Andhra Pradesh :			
1. Andhra Medical College, Visakhapatnam . .	88	38	126
2. Guntur Medical College, Guntur. . . .	100	30	130
3. Kurnool Medical College, Kurnool . . .	22	3	25
4. Osmania Medical College, Hyderabad . .	87	38	125
5. Gandhi Medical College, Hyderabad . .	54	21	75
6. Shri Rangaraya Memorial Medical College, Kakinada.	102	8	110
7. Medical College, Warangal (Students admitted to pre-professional course).	—	—	—
II. Assam :			
8. Assam Medical College, Dibrugarh . . .	99	11	110
III. Bihar :			
9. Prince of Wales Medical College, Patna . .	110	21	131
10. Darbhanga Medical College, Laheria-sarai .	89	26	115
11. Medical College, Ranchi (Students for this College were admitted at Medical College, Darbhanga (30) and at the Medical College, Patna(20).	—	—	—
IV. Bombay :			
12. Grant Medical College, Bombay . . .	96	51	147
13. Seth G.S. Medical College, Parel, Bombay .	42	45	87
14. Topiwala National Medical College, Bombay .	33	29	62
15. B. J. Medical College, Ahmedabad . . .	62	38	100
16. Medical College, Baroda	40	20	60
17. Government Medical College, Aurangabad .	39	9	48
18. B. J. Medical College, Poona . . .	71	32	103
19. Medical College, Jamnagar	54	6	60
20. Medical College, Nagpur	88	32	120
V. Jammu and Kashmir :			
21. Medical College, Srinagar	50	17	67
VI. Kerala :			
22. Medical College, Trivandrum . . .	90	41	131
23. Medical College, Calicut	79	21	100

Table No. 58

Number of students admitted to MBBS in various Medical Colleges of India during the year 1959—(Contd.)

States/Medical Colleges	Males	Females	Total
VII. Madhya Pradesh :			
24. Medical College, Jabalpur	57	15	72
25. Mahatma Gandhi Memorial Medical College, Indore.	71	29	100
26. Gajra Raja Medical College, Gwalior	82	20	102
27. Gandhi Medical College, Bhopal	60	12	72
VIII. Madras :			
28. Madras Medical College, Madras	90	42	132
29. Stanley Medical College, Madras	79	26	105
30. Christian Medical College, Vellore	25	26	51
31. Madurai Medical College, Madurai	80	15	95
32. Medical College, Tanjore	65	8	73
IX. Mysore :			
33. Kasturba Medical College, Manipal	98	8	106
34. Medical College, Mysore	103	32	135
35. Bangalore Medical College, Bangalore-2	52	9	61
36. Karnatak Medical College, Hubli	69	11	80
X. Orissa :			
37. Sriram Chandra Bhanj Medical College, Cuttack	117	43	160
38. Medical College, Burla	41	9	50
XI. Punjab :			
39. Medical College, Amritsar	76	21	97
40. Christian Medical College, Ludhiana	26	22	48
41. Government Medical College, Patiala	65	15	80
XII. Rajasthan :			
42. Sawai Man Singh Medical College, Jaipur	96	24	120
43. Bikaner Medical College, Bikaner	41	11	52
XIII. Uttar Pradesh :			
44. King George's Medical College, Lucknow	122	26	148
45. Medical College, Agra	81	18	99
46. G.S.V.M. Medical College, Kanpur	75	27	102

Table No. 58

Number of students admitted to MBBS in various Medical Colleges of India during the year 1959—(Concld.)

States/Medical Colleges	Males	Females	Total
XIV. West Bengal :			
47. Medical College, Calcutta	78	28	106
48. R. G. Kar Medical College, Belgachia Road, Calcutta-4.	92	15	107
49. Nilratan Sircar Medical College, Calcutta . .	82	26	108
50. Calcutta National Medical Institute, 32, Gorachand Road, Calcutta-14.	107	18	125
51. Bankura Sammilini Medical College, Bankura .	50	—	50
XV. Delhi :			
52. Lady Hardinge Medical College for Women, New Delhi.	—	69	69
53. The All India Institute of Medical Sciences, New Delhi-16.	39	11	50
54. Maulana Azad Medical College, New Delhi-1 .	55	15	70
XVI. Pondicherry :			
55. Medical College, Pondicherry . . .	37	10	47
TOTAL .	3,706	1,198	4,904

STATE-WISE ABSTRACT

1. Andhra Pradesh	453	138	591
2. Assam	99	11	110
3. Bihar	199	47	246
4. Bombay	525	262	787
5. Jammu and Kashmir	50	17	67
6. Kerala	169	62	231
7. Madhya Pradesh	270	76	346
8. Madras	339	117	456
9. Mysore	322	60	382
10. Orissa	158	52	210
11. Punjab	167	58	225
12. Rajasthan	137	35	172
13. Uttar Pradesh	278	71	349
14. West Bengal	409	87	496
15. Delhi	94	95	189
16. Pondicherry	37	10	47
TOTAL .	3,706	1,198	4,904

NOTE:— — Nil information.

Table No. 59

Number of students passed the final MBBS examination from the various Medical Colleges of India during the year 1959.

States/Medical Colleges	Males	Females	Total
I. Andhra Pradesh :			
1. Andhra Medical College, Vishakhapatnam	73	19	92
2. Guntur Medical College, Guntur	44	12	56
3. Osmania Medical College, Hyderabad	84	14	98
II. Assam :			
4. Assam Medical College, Dibrugarh	75	10	85
III. Bihar :			
5. Prince of Wales Medical College, Patna	92	14	106
6. Darbhanga Medical College, Laheriasarai	63	3	66
IV. Bombay :			
7. Grant Medical College, Bombay	82	31	113
8. Seth G.S. Medical College, Parel, Bombay	59	24	83
9. Topiwala National Medical College, Bombay	56	16	72
10. B. J. Medical College, Ahmedabad	74	12	86
11. Medical College, Ahmedabad	52	11	63
12. B. J. Medical College, Poona	88	25	113
13. Medical College, Nagpur	80	19	99
V. Kerala :			
14. Medical College, Trivandrum	71	19	90
VI. Madhya Pradesh :			
15. Mahatma Gandhi Memorial Medical College, Indore.	47	10	57
16. Gajra Raja Medical College, Gwalior	50	14	64
VII. Madras :			
17. Madras Medical College, Madras	96	49	145
18. Stanley Medical College, Madras	97	30	127
19. Christian Medical College, Vellore	28	15	43
20. Madurai Medical College, Madurai	36	9	45
VIII. Mysore :			
21. Kasturba Medical College, Manipal	102	7	109
22. Medical College, Mysore	57	11	68
IX. Orissa :			
23. Sriram Chandra Bhanj Medical College, Cuttack.	52	17	69

Table No. 59

Number of students passed the final MBBS examination from the various Medical Colleges of India during the year 1959—(Concld.)

States/Medical Colleges	Males	Females	Total
X. Punjab :			
24. Medical College, Amritsar	61	18	79
25. Christian Medical College, Ludhiana . .	17	22	39
26. Government Medical College, Patiala. . .	46	14	60
XI. Rajasthan :			
27. Sawai Man Singh Medical College, Jaipur .	54	14	68
XII. Uttar Pradesh :			
28. King George's Medical College, Lucknow .	139	22	161
29. Medical College, Agra	70	16	86
XIII. West Bengal :			
30. Medical College, Calcutta	172	15	187
31. R.G. Kar Medical College, Belgachia Road, Calcutta-4.	175	10	185
32. Calcutta National Medical Institute, 32, Gora-chand Road, Calcutta-14.	117	12	129
33. Nilratan Sircar Medical College, Calcutta . .	114	23	137
XIV. Delhi :			
34. The Lady Hardinge Medical College for Women, New Delhi.	—	39	39
TOTAL .	2,523	596	3,119

STATE-WISE ABSTRACT

1. Andhra Pradesh	201	45	246
2. Assam	75	10	85
3. Bihar	155	17	172
4. Bombay	491	138	629
5. Kerala	71	19	90
6. Madhya Pradesh	97	24	121
7. Madras	257	103	360
8. Mysore	159	18	177
9. Orissa	52	17	69
10. Punjab	124	54	178
11. Rajasthan	54	14	68
12. Uttar Pradesh	209	38	247
13. West Bengal	578	60	638
14. Delhi	—	39	39
TOTAL .	2,523	596	3,119

NOTE:— —Nil information.

Table No. 60

Dental institutions, number of admissions and students graduated in India during the year 1959.

Dental Institutions	Year of establishment	Teaching staff		Total enrolment		Annual admission		Students graduated	
		1958	1959	1958	1959	1958	1959	1958	1959
1	2	3	4	5	6	7	8	9	10
1. Punjab Government Dental College, Amritsar.	1952	8	8 (Dental) 7 (Medical)	54	68	14	30	10	12
2. Nair Hospital Dental College, Bombay	1933	73	45 (Dental) 28 (Medical)	254	275	60	60	10	37
3. Sir C. M. Dental College, Bombay .	1928	33	24 (Dental) 15 (Medical)	131	163	75	75	17	24
4. Calcutta Dental College, Calcutta .	1920	26	27 (Dental) 18 (Medical)	121	138	30	40	15	14
5. Dental Wing, K.G. Medical College, Lucknow.	1949	6	17 (Dental) 8 (Medical)	110	123	20	40	17	19
6. Dental Wing, Government Medical College, Patiala.	1956	7	6 (Dental) 8 (Medical)	20	41	12	12	—	—
7. Dental Wing, Madras Medical College, Madras.	1953	18	17 (Dental)	80	87	20	20	9	21
8. Dental Wing, Bangalore Medical College, Bangalore.	1959	—	4 (Dental)	—	10	—	10	—	—
9. Dental Wing, Medical College, Trivandrum.	1959	—	8 (Dental)	—	15	—	15	—	—
10. Dental Wing, Osmania Medical College, Hyderabad.	1959	—	4 (Dental)	—	25	—	25	—	—
TOTAL .		171	160 (Dental) 84 (Medical)	770	945	231	327	78	127

NOTE:— —Nil information.

Table No. 61

Statistics of the work done on medico-legal investigations by the Chemical Analysers, Chemical Examiners and the Serologist to the Government of India during the year 1959.

Categories	Human poisoning		Animal poisoning		Stains		Miscellaneous		Total		General analysis and other work	
	Cases	Articles	Cases	Articles	Cases	Articles	Cases	Articles	Cases	Articles	Cases	Articles
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Director-*cum*-Senior Chemical Examiner, Forensic Laboratory, Calcutta-12.	—	1,012	—	70	—	8,863	—	2,770	—	12,715	—	4,373
2. Chemical Examiner, Punjab, Patiala.	996	2,913	18	64	946	3,667	569	1,060	2,529	7,704	5,876	8,839
3. Chemical Examiners to the Govts. of Uttar Pradesh and Madhya Pradesh.	620	1,728	35	52	2,496	12,626	17	31	3,168	14,437	2,017	5,720
4. Director State Forensic Science Laboratory and Chemical Analyser, Bombay.	3,265	5,659	72	289	1,798	11,768	418	1,378	5,553	19,094	—	44,595
5. Director, State Forensic Science Laboratory and Chemical Examiner to the Government of Madras.	1,666	6,710	42	279	1,042	6,393	174	1,080	2,924	14,462	11	22
6. Chemical Examiner, Jammu and Kashmir, Jammu.	145	356	4	11	51	191	1	1	201	559	600†	1,084‡
7. Chemical Examiner, Mysore, Bangalore.	452*	1,767*	—	—	614	5,728	243	324	1,309	7,819	2,364	3,452
8. Chemical Analyser, Indore .	86	209	1	2	44	195	65	171	196	577	—	150

Table No. 61

Statistics of the work done on medico-legal investigations by the Chemical Analysers, Chemical Examiners and Serologist to the Government of India during the year 1959—(Concld.)

1	2	3	4	5	6	7	8	9	10	11	12	13
9. Chemical Examiner, Rajasthan, Jaipur.	247	614	5	11	237	1,599	127	285	616	2,509	—	—
10. Chemical Examiner for Junagadh (Bombay).	126	225	4	5	292	1,844	10	23	432	2,097	—	5,040
11. Chemical Examiner, Andhra Pradesh.	329	1,212	10	19	505	3,575	51	192	895	4,998	17	17
12. Director, Central Forensic Science Laboratory, Calcutta-14.	1	3	—	—	41	265	11	44	53	312	42	176
13. Serologist and Chemical Examiner to the Govt. of India, Calcutta.	—	—	—	—	(a)9,743	(a)46,478	—	—	9,743	46,478	(b)5,135	(b) 27,475 (c)11,367

NOTE:— *Including animal poisoning also.

†Including 410 pathological specimens.

‡Including 894 pathological specimens.

(a) Including 191 cases with 283 articles from the Government of Burma.

(b) Detection of blood and semen groups from stains for medico-legal purposes.

(c) Including 5,767 W. R., 5,600 V.D.R.L.

— Nil information.

Table No. 62

Statistics of the work done by the various Health Organisations at major Sea-ports in India during the year 1959.

Particulars of work done	Bombay	Calcutta	Madras	Cochin	Visakhapatnam	Kandla	Total
I. *In-coming Vessels :*							
1. No. of Ships inspected	203	26	449	42	33	17	770
2. No. of crews medically examined . . .	20,283	1,860	25,170	2,349	1,477	791	51,930
3. No. of passengers medically examined. .	37,313	2,538	29,788	133	2	8	69,782
4. No. of ships arriving from yellow fever areas inspected . . .	192	20	93	40	25	12	382
5. No. of crews inspected	16,022	1,159	5,587	2,227	1,378	535	26,908
6. No. of passengers inspected . . .	27,223	5	89	125	2	8	27,452
7. Infectious diseases cases detected on vessels .	38	—	3	—	—	—	41
II. *Out-going Vessels :*							
1. No. of ships medically inspected . . .	1,284	1,509	440	657	177	133	4,200
2. No. of passengers medically examined. .	91,825	16,821	27,986	12,603	53	24	149,312
3. No. of crews medically examined . . .	85,121	77,129	24,712	35,558	10,359	6,718	237,597
4. No. of ships inspected for laskar provision .	412	666	45	42	26	20	1,211
5. No. of ships inspected for medical stores on board . . .	21	94	25	—	2	19	161
6. No. of ships given medical advice on high seas	7	3	5	—	—	—	15
7. No. of ships fumigated	8	26	—	25	—	—	59
8. No. of ships issued with D.E.C. . . .	145	162	25	17	8	1	358
9. No. of ships issued with permits . . .	12	14	17	8	1	2	54
10. No. of pilgrimships inspected . . .	13	—	—	—	—	—	13
11. No. of pilgrims inspected	—	—	—	—	—	—	—

NOTE:— —Nil information.

Table No. 63

Statistics of aircrafts medically inspected arrived from and left for foreign countries from International Airports in India during the year 1959.

Particulars of work done	Bombay Airport (Santacruz)	Calcutta Airport (Dum Dum)	Madras Airport	Tiruchirapalli Airport	Delhi Airport (Palam)	Amritsar Airport	Total
I. *Inward Traffic :*							
1. No. of aircraft medically inspected . .	2,091	3,638	742	389	1,745	213	8,818
2. No. of passengers medically inspected .	78,107	1,10,198	15,412	4,477	47,450	1,620	2,57,264
3. No. of crews medically examined . . .	17,532	29,103	4,012	1,185	14,103	817	66,752
4. No. of aircrafts disinfected . . .	941	72	—	—	322	—	1,335
5. No. of passengers quarantined in the Y. F. Isolation Hospital for being at risk to yellow fever . . .	99	42	1	—	—	—	142
II. *Dispensaries :*							
1. No. of patients treated	31,333	19,413	—	—	—	—	50,746

NOTE:— —Nil information.

Table No. 64

Number of seamen examined at various major sea-ports in India and seamen treated at the Seamen's Clinics at Bombay and Calcutta during the year 1959.

Particulars of work done	Bombay	Calcutta	Madras	Cochin	Visakhapatnam	Total
1. No. of seamen examined	10,078	6,722	314	245	103	17,462
2. No. of seamen declared fit	6,392	5,155	254	225	89	12,115
3. No. of seamen declared temporary unfit	3,596	1,404	46	19	—	5,074
4. No. of seamen declared permanently unfit	90	163	5	1	12	271
Seamen's Clinics :						
I. Seamen treated (out-patients) :						
(i) New cases	2,854	1,741	—	—	—	4,595
(ii) Old cases	8,021	15,465	—	—	—	23,486
TOTAL	10,875	17,206	—	—	—	28,081
II. Seamen treated (in-patients)	254	—	—	—	—	254

NOTE:— —Nil information.

Table No. 65

Number of bacteriological examinations etc., done in the Central Drugs Laboratory, Calcutta during the year 1959.

1. Sterility tests	804
2. Anti-biotic Assay	96
3. Microbiological assay of Vitamins	261
4. Disinfectants (R. W. test)	77
5. Surgical sutures	44
6. Surgical bandages etc.	30
7. Special Court Cases etc.	29
8. Miscellaneous samples (agar agar, gelatin, glasswares peptone, etc.)	12
TOTAL	1,353

Table No. 66

Number of other samples tested and examinations done in the Central Drugs Laboratory, Calcutta during the year 1959.

1. No. of samples tested in the Pharmaceutical Chemistry Section	1,014
2. No. of samples tested in the Bio-chemistry Section	552
3. No. of samples tested in the Pharmacology Section	437
4. No. of samples tested in the Pharmacognosy Section	96
TOTAL	2,099

Table No. 67

Products supplied by the Haffkine Institute, Bombay to various hospitals and dispensaries functioning under Government and Municipalities and to the Employees' State Insurance Scheme during the year 1959.

Name of products	No. of tablets supplied
1. Vitamin AD tablets	77,98,250
2. Vitamin AD (Spl.) tablets	1,21,000
3. Vitamin A Forte tablets	2,50,050
4. Vitamin AD Forte tablets	9,16,188
5. Vitamin BC tablets	1,26,27,318
6. Vitamin BC No. 3 tablets	6,23,600
7. Vitamin B1 tablets	11,90,378
8. Vitamin B2 tablets	1,87,470
9. Vitamin C tablets	18,25,044
10. Acid Nicotinic tablets	4,60,398
11. Nicotinamide tablets	80,650
12. Vitamin K tablets	64,200
13. Multivitamin tablets	1,16,33,081
TOTAL	3,77,77,627
14. Sulphathiazole tablets	39,30,500
15. Sulphadiazine tablets	62,70,400
16. Sulphaguanidine tablets	45,20,125
17. Quinine sulphate tablets	3,50,275
18. Magnesium trisilicate tablets	2,11,100
TOTAL	1,52,82,400
19. Sulphanilamide paste	458 lbs.
20. Solapsone strong B.P.C.	40,950 c.c.
21. Pemon	16,946 lbs.

NOTE:—Besides the above products, 804·9 kgm. of sulphathiazole powder was manufactured and also intermediate equivalent to about 850 kgm. of sulphathiazole were manufactured. 200 kgm. of B. P. grade quinine sulphate was obtained from sub-standard quinine sulphate after purification.

Table No. 68

Quantity of sera and vaccine manufactured by the Central Research Institute, Kasauli during the year 1959.

1. Anti-cholera Vaccine	23,09,152 c.c.
2. T.A.B. Vaccine	8,78,272 c.c.
3. Anti-rabic Vaccine (Human)	49,90,223 c.c.
4. Anti-rabic Vaccine (Animal)	88,685 c.c.
5. Anti-rabic Vaccine (Dog)	19,660 c.c.
5. Curative Vaccine	2,300 doses
7. Influenza Virus Vaccine	4,440 doses
8. Concentrated Anti-venom Serum	1,57,610 c.c.
9. Diphtheria Anti-toxin	3,490 tubes of 10,000 units each
10. Normal Horse Serum	10,740 c.c.
11. High Titre Sera	761 c.c.
12. Anti-sheep Haemolytic Serum	179 c.c.
13. Tetanus Toxoid	8,120 c.c.

Quantity of vaccine and sera supplied by the Centra l Research Institute, Kasauli during the year 1959.

1. Anti-cholera Vaccine	26,54,238·5 c.c.
2. T. A. B. Vaccine	8,66,150·5 c.c.
3. Anti-rabic Vaccine (Human)	50,37,863 c.c.
4. Anti-rabic Vaccine (Animal)	92,084 c.c.
5. Anti-rabic Vaccine (Dog)	17,475 c.c.
6. Curative Vaccine	2,300 doses.
7. Influenza Virus Vaccine	4,440 doses.
8. Concentrated Anti-venom Serum	1,39,980 c.c.
9. Diphtheria Anti-toxin	2,801 tubes of 10,000 units each.
10. Normal Horse Serum	5,240 c.c.
11. Anti-rabic Serum	320 c.c.
12. High Titre Sera	761 c.c.
13. Anti-sheep Haemolytic Serum	179 c.c.
14. Tetanus Toxoid	8,690 c.c.

Table No. 69

(a) *Number of samples tested and examinations done by the Central Research Institute, Kasauli during the year* 1959.

1. Penicillin	89
2. Omnadin	1
3. Iron Dextran Glycoside	1
4. Protein Hydrolysate	1
5. Catgut	148
6. Tetanus Antitoxin	54
7. Gas-Gangrene Serum	1
8. Diphtheria Anti-toxin	9
9. T. A. B. Vaccine	4
TOTAL	308

(b) *Number of bacteriological and histological examinations done by the Central Research Institute, Kasauli during the year* 1959.

1. Blood for Widal and Weil-Felix test	1
2. Cultures for Pathogenic Organisms	27
3. Cultures for Acid Fast Organisms	4
4. Water Samples for testing	4
5. Histological examinations	22
TOTAL	58

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