

CHAPTER XVI

MEDICAL AND PUBLIC HEALTH SERVICES

Background

Before the advent of the British two systems of medicine flourished side by side. The Hindus mainly patronized the Ayurvedic system and the Muslims favoured the Unani system. The allopathic system of medicine was introduced during the British rule. Exotic but based on the progressive researches in medical science, it gradually carried conviction of its usefulness. The Government opened a number of hospitals and dispensaries in the country to provide medical facilities on an increasing scale. These were, however, at no time adequate to meet the needs of the whole population. The rural masses in particular therefore continued to depend on the services of Ayurvedic practitioners who, apart from being more readily available, charged small fees. Realising that the indigenous system of medicine had been favoured by the masses for a long time, the Punjab Government established the Directorate of Ayurveda in November 1956, for its revival. At the same time it kept on expanding modern medical facilities to check disease and improve public health.

Medical and Health Services

The administration of medical relief required attention on several fronts. The health services had to be expanded to cope with the increased number of hospitals and dispensaries and to supervise measures to check epidemics and to organize health education and all schemes connected with the promotion of public health.

The medical and health services are looked after by the Chief Medical Officer assisted by Deputy Chief Medical Officer (Medical) and Deputy Chief Medical Officer (Health).¹ The medical service is essentially a hospital organization for rendering medical relief to the

1. The departmental set-up was re-organized in July 1964, with a view to providing medical aid to the people in a better way. The two officers concerned with health and medical problems prior to the re-organization of Health Department were the District Medical Officer of Health and the Civil Surgeon, one each at the district headquarters. Rural dispensaries, rural health centres and primary health units were administered by the District Medical Officer of Health while the local body, other civil dispensaries and district and tahsil hospitals were under the charge of the Civil Surgeon.

public. This is provided through Allopathic and Ayurvedic institutions. In 1967, there were 71 allopathic hospitals, dispensaries, health centres and family planning clinics and 22 Ayurvedic dispensaries in the district. The details of these institutions are given in Table XLI of Appendix and more important ones are described here.

Medical College Hospital, Rohtak.—This hospital was established in 1962 as the teaching hospital attached to the Medical College, Rohtak. It is the premier medical institution of the State and provides referral and specialised services. It is headed by a Medical Superintendent, but is under the overall administrative control of the Principal of the Medical College. There are 16 departments, viz. Medicine, Clinical Medicine, Surgery, Clinical Surgery, Ophthalmology, Obstetrics and Gynaecology, Paediatrics, Orthopaedics, Dermatology, Ear Nose Throat, Tuberculosis, Psychiatry, Dental, Radiology, Clinical Pathology and Casualty, headed by different professors on the teaching staff of the Medical College. In 1966, 69,478 persons were given treatment as outpatients while 11,698 patients were treated as indoor patients.

The hospital provides accommodation for about 650 beds, an extensive outpatients department, a block of special wards, an X-ray department, a kitchen block, an administrative block and two cafeterias. Ancillary facilities including a clinical laboratory, a blood bank, a dispensary and stores are also provided.

District Tuberculosis Clinic, Rohtak.—Changing concepts in the treatment of tuberculosis have brought the clinical/domiciliary service to the forefront. The District T. B. Association, Rohtak, is running a Tuberculosis Clinic in Rohtak town. It was started in 1945 in a very small building in the premises of the Civil Hospital. In August 1960, the clinic shifted to its own building on the Gohana road.

The Clinic provides diagnostic and treatment facilities for cases of pulmonary tuberculosis. It is catering to the needs of all tubercular cases in the district. Every year about 3,000 new cases are examined, out of which approximately 25 per cent are detected as T.B. cases. Poor patients are given free medicine and diagnostic service. The Clinic affords domiciliary treatment to the T.B. cases in rural areas through Medical Officers, in charge of the primary health centres/units/dispensaries.

Shri Yogiraj Mastnath Ayurvedic Free Hospital, Asthal Bohar.—Constructed in the memory of late Mahant Purannath, it was completed and equipped at a cost of Rs. 3,08,000 and opened as a free hospital on September 10, 1951.

This hospital with 200 beds has 2 sections—eye and general. The staff of the eye section consists of 1 Eye Specialist, 1 House Surgeon, 3 Compounders, 5 Ward Servants besides other class IV employees. The medical side of the general section is under the charge of an Ayurvedic Specialist while the surgical side is under a House Surgeon. The other staff in the general section consists of 3 Compounders, 1 Ward Servant and other class IV employees. The general section of the Hospital is also attached to the Ayurvedic College, Asthal Bohar, for imparting practical training to the students.

Diseases Common to the District

The common diseases that occur in the district are typhoid group of fevers, tuberculosis, dysentery and diarrhoea, trachoma and chest infections (other than tuberculosis). Epidemic diseases, viz. cholera, plague and smallpox are the three notifiable diseases under the Epidemic Diseases Act, 1897.

Cholera.—It is not endemic in the Rohtak district. The number of cases has not been large in recent years because of the strict vigilance and other anti-cholera measures like medical inspection posts and mass inoculation in hospitals and dispensaries. With the development and expansion of public health activities relating to pure water-supply, pavement and drainage of streets, removal of refuse and manure heaps, anti-fly and general sanitation measures, the incidence of the outbreaks has been reduced.

During 1950, cholera appeared in the district and 76 cases were reported. Of these 46 proved fatal. Again, infection was imported in 1960 from Mathura and Vrindaban in Uttar Pradesh, where some inhabitants of this district had gone on a pilgrimage. This led to 82 cases with 24 deaths. Barring these two occasions, the intervening years have been completely free from cholera.

Plague.—At one time, it was one of the most dreaded pestilences. Ever since its appearance in 1897, plague had never been entirely

eradicated from the Province till 1937. It first appeared in the Jhaffar tahsil in March 1903 and within a year spread to the adjoining tahsils. The mortality which had been slight in the first year then rose to 4,282 and in 1905 reached the alarming figure of 31,964, the northern part of the district being most severely attacked. Plague ravaged the district again in 1907, 1924 and 1926 when the mortality in the respective years was 34,906, 33,639 and 21,203.

After 1937, the district has fortunately remained free from this epidemic. The factors determining its disappearance include the development of natural immunity to the disease in the rat population, spraying of houses with DDT to kill rat fleas and de-ratting measures.

Smallpox.—This district has never been free from smallpox throughout its history. The disease has been characterised by waves of increased incidence separated by varying periods of quiescence. Though the increased facilities and public awareness for vaccination and re-vaccination have resulted in a remarkable reduction in the outbreak of the disease, yet its complete eradication is still a long way off. Table XLII of Appendix gives data on the incidence of smallpox and the preventive measures taken in the district during 1950—65.

Many factors operate adversely. The cases are concealed and not reported to the authorities by the villagers on account of their belief that it is a visitation of goddess *mata*. New-born children are not vaccinated and grown-ups are not re-vaccinated. Above all, the vaccination staff is insufficient and not always very effective.

Vaccination is a potent weapon for eradicating it. The district was covered for mass-vaccination under National Smallpox Eradication Programme. The entire population was vaccinated between May 21, 1962, and July 31, 1963. This measure suppressed the epidemic from 1963 to 1965, but it spurted up again in 1966 as part of a country-wide epidemic.

Malaria.—This epidemic develops during years of excessive wet monsoon associated with overflow of rivers resulting in a large number of stagnant pools. Due to heavy rains in 1952, as many as 100 villages were flooded. Extensive measures had, therefore, to be

taken to prevent the outbreak of the disease in the affected areas. Anti-malaria work was carried out in 115 localities of Rohtak, Sonapat and Gohana tahsils in 1953 and 1954.

Malaria control measures undertaken during 1953—58 resulted in a marked decline in the annual incidence of the disease. The child spleen rate diminished and, similarly, the child parasite rate decreased. With this success National Malaria Control Programme was switched over to National Malaria Eradication Programme during 1958. Under this programme, anti-malaria operations were carried on regularly in the district by the Malaria Unit, Rohtak. Consequently the number of cases in the district considerably dwindled and the area has been declared almost free from malaria :

Year	Malaria cases treated in dispensaries
1952	20,684
1953	23,918
1954	..
1955	22,356
1956	..
1957	13,880
1958	4,580
1959	3,395
1960	3,080
1961	1
1962	—
1963	2
1964	1
1965	2
1966	6

After the eradication of malaria Gohana sub-division comprising Gohana, Mundlana and Kathura blocks was switched over to the maintenance phase from December 1, 1965. It was to be supervised by Basic Health Workers in the primary health centres. Malaria work in these blocks was to be supervised by the Medical Officer under the maintenance scheme. In January 1967, the special appraisal team again visited the district and recommended the maintenance phase for the rest of the district except Nahar block. The work in the consolidation phase was supervised by the Deputy Chief Medical Officer (Health), the Malaria Officer, 2 Senior Malaria Inspectors and 4 Malaria Inspectors. There were 114 Surveillance Workers doing surveillance work in the consolidated area.

Tuberculosis.—It has been a major problem in the district. In order to control the disease emphasis has, during the recent years, been placed on prevention. B.C.G. vaccination campaign is well in progress. It was launched under the T.B. Control Programme in 1950 by one Mobile Team responsible for mass inoculation in the whole of the then Punjab State. An independent team for the district consisting of technicians under the supervision of the Deputy Chief Medical Officer (Health) came into existence in 1960 and has since been carrying on B.C.G. work in a planned manner visiting house to house. The situation is well under control. After covering Sonapat sub-division, it is operating in Gohana sub-division. The entire population of the district has been tuberculin tested twice and those found negative have been given B.C.G. vaccination. The treatment of T.B. cases is also extended through the Medical Officer, in charge, primary health centres/units.

Trachoma.—Trachoma is prevalent amongst the rural masses. The primary health centres are playing a major role in the control of the disease.

Influenza.—This epidemic has made its appearance frequently. During 1955 and 1956, 1,570 and 1,475 cases occurred. In 1957 an epidemic occurred as in the rest of the country. As many as 9,514 cases were reported.

Communicable Diseases.—The most common communicable diseases are typhoid and enteric group of fevers, dysentery and diarrhoea. The district has remained free from cholera since 1951 though there was a mild epidemic with 24 deaths in 1960.

The communicable diseases are well under control as a result of organised preventive measures like chlorination of wells by the public

health staff at primary health centres/units and the supervisory staff at the district headquarters.

Vital Statistics

The satisfactory results achieved by the Health Department are reflected in reduced incidence of diseases, lower mortality — both infant and adult — longer expectation of life and all round better health of the community. Table XLIII of Appendix showing the number of deaths caused by different diseases from 1950 onwards and the following table showing birth and death rate and the infant mortality from 1941 onwards illustrates this position :—

Year	Birth rate per thousand of population	Death rate per thousand of population	Infant mortality (under one year of age) per thousand live births
1941	49.28	28.64	174.14
1942	41.26	44.26	326.72
1943	31.31	32.30	274.28
1944	38.79	28.10	175.03
1945	43.19	21.97	138.01
1946	42.40	16.70	119.01
1947	42.50	20.10	160.30
1948	39.80	15.40	119.34
1949	39.70	14.90	115.12
1950	40.87	19.26	124.94
1951	45.42	14.29	98.39
1952	45.66	19.24	117.34
1953	45.72	19.22	111.49
1954	42.27	13.82	93.33
1955	49.54	14.49	87.04

Year	Birth rate per thousand of population	Death rate per thousand of population	Infant mortality (under one year of age) per thousand live births
1956	47.32	16.25	109.15
1957	48.32	14.87	99.14
1958	47.65	16.17	101.13
1959	45.92	11.83	76.18
1960	46.03	14.98	75.22
1961	40.83	11.38	72.24
1962	38.50	11.30	71.13
1963	37.11	10.35	58.08
1964	34.25	9.64	60.93
1965	34.83	8.76	61.95
1966	35.19	9.00	43.02

These figures are very revealing. While the birth rate has been more or less steady through the two decades it has declined since 1962. The death rate has also fallen considerably in the sixties. The steady fall in infant mortality also coincides with the birth and death rate.

General standard of health.—The general standard of health of the inhabitants of the Rohtak district compares favourably with that of other districts in the State. Within the district itself the average build and physique of both males and females in the Jhajjar tahsil is superior to that of people in other tahsils.

Population variation.—Population has varied during the intercensal periods consequent upon natural increase or decrease as well

as large-scale epidemics and particularly in the 1941—51 decade owing to the movement of people caused by the Partition:

Census Year	Population	Variation ¹	Percentage increase (+) or decrease (—)
1901	8,58,184
1911	7,40,319	(—)1,17,865	(—)13.7
1921	7,98,105	(+) 57,786	(+) 7.8
1931	8,33,837	(+) 35,732	(+) 4.5
1941	9,87,065	(+)1,53,228	(+)18.4
1951	11,22,046	(+)1,34,981	(+)13.7
1961	14,20,391	(+)2,98,345	(+)26.6

The apparently smaller increase in the population during the 1941—51 decade was due to the exodus of a large number of people at the time of the Partition than the number of immigrants from West Pakistan. The greater increase in the population during the 1951—61 decade was due to a lower rate of mortality in consequence of measures adopted by the Government after Independence.

Preventive Measures to promote Public Health

The modern conception of good health rightly lays greater emphasis on prevention of disease. This necessitates various kinds of measures. The younger generation at school as well as the older members of the community must be given health education which is perhaps the most important preventive measure. The importance of good health habits formed in the earlier years cannot be over-emphasized. Likewise, family planning and maternity welfare require the greatest attention if the problem of over population has to be satisfactorily dealt with. It is equally necessary to take measures to prevent adulteration of food to promote the knowledge and

1. For detailed comments on variation, see pages 35-36 of Chapter on 'People'.

practice of nutritive articles of food, to make supply of clean drinking-water possible for even those living in rural areas and to take all other such steps as will improve environmental hygiene.

School health services.—Under the programme started during the Second Five-Year Plan, a school health clinic was established at Rohtak in 1958-59. It provides medical inspection, treatment and follow-up of school-going children in consultation with their parents. The staff of this clinic includes two doctors, one in charge of the general clinic and the other of the eye and E.N.T. (Ear, Nose, Throat). There is also a Dental Surgeon who treats the dental cases. The school health services are also provided by the Medical Officers in charge of the primary health centres/units.

The work done by the School Health Clinic, Rohtak, is detailed below :

	1962	1963	1964	1965
Number of students examined	10,799	5,992	10,023	3,441
Number of students found defective	1,880	2,725	7,579	2,740
Number of students given treatment	1,718	2,725	7,579	2,740

Health education.—The Medical Officers, in charge primary health centres units and their staff also carry out health education and propoganda. The District Family Planning Education Officer also utilises his staff to disseminate health education. This programme creates health consciousness in the younger and older members of the community.

Family planning.—As elsewhere the expectation of life in the Rohtak district itself has risen to 50 years which is nearly double the pre-Independence figure. This has happened as a consequence of health education, prevention of disease and medical relief. In order to carry out Government policy the Family Planning Programme was introduced in the district in 1959 with the opening of 2 family planning clinics — one at Rohtak (urban) and the other at Ganaur (rural — Sonapat tahsil). The third was opened at Madina (Gohana tahsil). With the help of grants-in-aid from the Government of India, the District Red Cross Society has also opened 8 family planning clinics. In addition, family planning clinics are functioning at all the primary health

centres/units except Primary Health Centre, Sampla. Vasectomy/I.U.C.D. (popularly known as Loop)¹ camps are organized at all these centres, units and maternity and child welfare centres. The conventional contraceptives such as condoms, foam tablets, jellies, diaphragms etc., are also made available freely.

The following data gives an idea about the successful work done under the family planning programme :—

Year	Number of persons				
	given advice	visited at home	attended the clinics for check-up visits	operated upon for sterilization (viz. vasectomy operations)	fitted with loop
1959-60	292	310	279	35	—
1960-61	804	5,003	408	—	—
1961-62	16,902	7,864	815	—	—
1962-63	16,331	9,044	2,280	12	—
1963-64	17,196	10,159	3,024	79	—
1964-65	19,830	12,363	3,790	432	—
1965-66	26,426	13,989	4,730	1,036	7,108
1966-67	—	—	—	1,458	13,670

Efforts are afoot to make the people deeply conscious of the need for family planning through intensive health education/propaganda. Family planning seminars/camps under the supervision of the Medical Officer are organized in every block where vasectomy operations are performed and family planning activities are explained and highlighted. Loop insertions, started in 1965, have become very popular.

1. Loop is an intra-uterine contraceptive device that prevents the development of a fetus in the womb.

Maternity and child health.—There exist 8 maternity and child welfare centres in the district. Of these, 5 are maintained by the Red Cross Society, Rohtak, and 3 by the Municipal Committees, Rohtak and Sonapat. All the Lady Health Visitors posted at these centres belong to the provincial cadre. In addition, the maternity and child welfare work is done in all the primary health centres/units and their sub-centres.

Primary health centres.—There are 13 primary health centres and 3 primary health units, i.e. one in each block and two in Kharkhauda block (one at Kharkhauda and the other at Sampla). These provide facilities for curative/preventive side and also for health education. All the institutions are equipped with microscopes and clinical side-rooms. Investigation facilities are also available. These are self-sufficient institutions and provide facilities for maternity and child welfare, family planning, T.B. control, malaria eradication, etc., to every person living even in a remote corner of the district. These centres are under the charge of a Medical Officer who supervises all the health activities in a block area. He supervises and guides the work of other institutions, viz. maternity and child welfare centres, rural dispensaries and Ayurvedic dispensaries in the capacity of Block Medical Officer.

The primary health centres/units are UNICEF-aided and have been provided with UNICEF jeeps, refrigerators and other equipment. UNICEF executes its Milk Feeding Programme through these centres/units and their sub-centres.

Prevention of adulteration in food-stuffs.—Every effort is being made to eradicate adulteration in food-stuffs under the Prevention of Food Adulteration Act, 1954. The officers invested with the powers of Food Inspector are: Chief Medical Officer, Deputy Chief Medical Officer (Health), Deputy Chief Medical Officer (Medical), Government Food Inspector, District Sanitary Inspectors, Gohana, and Sonapat and all H.C.M.S. II Officers in the district. In urban areas under the local bodies Chief Sanitary Inspectors of Municipal Committees, Rohtak and Sonapat also exercise powers under the Act. The work done about the prevention of adulteration in food-stuffs is detailed in Table XLIV of Appendix.

Nutrition.—The primary health centres/units deal with nutrition, particularly in maternity and child welfare centres by organising Milk Feeding Programme, providing vitamin A and D capsules, iron and

multi-vitamin tablets and B-complex tablets received by them from the UNICEF. They also provide nutrients and medicines under School Health Services to the needy school children. With the assistance of the Government of India and UNICEF, Applied Nutrition Programme is also being carried out in Rai block. It aims at educating people in taking balanced and nutritive food from among the available food items.

Water-supply (urban).—The piped water-supply system is functioning at Rohtak, Sonapat, Bahadurgarh, Jhajjar and Beri. Rohtak waterworks is the oldest having been set up in 1934. Gohana and Maham waterworks are under construction. The present waterworks at Rohtak need considerable extensions to provide adequate amount of water. The water-supply *per capita* is about 10 to 20 gallons per day against the requirement of 20 to 40 gallons.

Water-supply (rural).—From the point of view of availability of drinking-water, the district can be divided into three regions, namely, (i) the areas on the eastern side contiguous to the Yamuna falling in the Sonapat tahsil, (ii) the southern areas of the Jhajjar tahsil not covered by any canal irrigation system, and (iii) the rest of the district. People are mostly dependent upon water drawn from dug-wells. Except in region (i), these dug-wells are constructed near ponds where the water in the wells exists due to the leaching action of the ponds and is therefore subject to all sort of surface pollution. Under the National Water-Supply and Sanitation Programme only eight villages, viz. Bhalaut (tahsil Rohtak); Khanpur Kalan (tahsil Gohana); Rai, Jatheri, Badh Khalsa, Badh Malak (tahsil Sonapat); Kaliawas and Khachroli (tahsil Jhajjar); have been covered so far. The scarcity of drinking water is the acutest in region No. (ii)¹ and a scheme costing about Rs. 36 lakhs and covering 28 villages has been taken up.

Sewerage and sanitation (urban and rural).—Rohtak and Sonapat are the only two towns with underground sewerage system. The coverage of the sewerage system is partial as only a portion of the trunk mains has been laid. The sewage pumping station of Rohtak was damaged during unprecedented floods in 1960 due to the

1. In some villages of Jhajjar tahsil people sometimes have to walk for miles to fetch water. In Maham and Nahar areas, the underground water being brackish, people use water from a pond or a canal for cooking purposes if any happens to be near at hand. They continue to drink water from the wells even if it is brackish.

extraordinary rise of spring level. It is awaiting repairs. However, it is functioning as a palliative measure as its working becomes unsatisfactory during heavy rains.

Environmental hygiene.—The sanitation in rural areas is still not satisfactory. Under the Community Development Programme certain villages have got paved streets, pukka drains and sanitary wells but their maintenance is poor. The *panchayats* generally do not pay any attention to the work. In most of the villages there are no satisfactory arrangements for the disposal of human and cattle excreta and sullage matter. The sanitation work is entrusted to the Deputy Chief Medical Officer (Health). He is assisted by 1 Senior Sanitary Inspector, 3 District Sanitary Inspectors, 1 Sanitary Supervisor, 6 Sanitary Mates and 14 Zila Parishad Swasth Sahayaks and 12 Government Swasth Sahayaks posted at the district headquarters and tahsil headquarters, who frequently visit rural areas in order to improve the environmental sanitation. There is other staff also under the Block Medical Officer. Under the present set-up in which the supervisory work is effective, there is a distinct improvement in the environmental sanitation in rural areas which is reflected by decrease in the death rate.

The sanitary arrangements in the urban areas are also far from satisfactory. Even at Rohtak there is no Municipal Medical Officer of Health at present. Other committees in the district have Sanitary Inspectors or only Vaccinators to look after the sanitation of the towns.

Flood relief.—During floods the public health staff takes speedy measures to afford relief to the flood affected areas. Temporary dispensaries are established. Drinking-water wells are repeatedly disinfected and the affected localities are sprayed with insecticides to prevent breeding of the mosquitoes and flies and thus to check malaria. Funds are also provided by the Government for purchase of medicines and other equipment which is utilised for flood relief work as and when required. In addition the District Red Cross Society distributes blankets, quilts and other items of clothing, skim-milk, multi-vitamin tablets and other items of necessity. Such measures were taken during the years 1957, 1959, 1960, 1961, 1962, 1963, 1964 and 1967 when vast areas of the district were flooded.

UNICEF work and other preventive programmes.—UNICEF is doing very good work to promote good health in the district. It has provided

the equipment standard sets to all the primary health centres/units in the district qualified for such assistance. Thirteen UNICEF vehicles have also been provided for these centres/units. In addition, milk and medicine supplements are supplied every year to these as well as to 8 maternity and child welfare centres. UNICEF's Milk Feeding Programme is carried out through the primary health centres/units and maternity and child welfare centres where more than 40,000 lb. of skim-milk powder is distributed to the beneficiaries every year. UNICEF authorities are now considering to provide assistance to the remaining 3 primary health centres; namely, Kathura, Dhakla and Juan.