CHAPTER XV.

MEDICAL AND PUBLIC HEALTH SERVICES.

Survey of Public Health and Medical Facilities in Early Times.

A proper survey of public health and medical facilities in early times is not possible because of paucity of source-materials. It could, however, be guessed that the district lived entirely in the villages and the incidence of diseases probably was not as high as at present because the living conditions were easier and there was not much strain on one's nerves. Good food-stuff was available in plenty and at a cheap cost. But it could also be presumed that many of the deaths were due to imperfect diagnosis of the diseases and want of proper medicines. The village *Vaidyas* and *Hakims* were good but up to a certain point. Regarding surgical operations they had their difficulties. There has been no very well reputed *Vaidya* or *Hakim* in this district as far as local enquiries went. The second line of doctors was supplied by the *Jarhas, Hajams* and families that kept traditional medicines. The *Jarhas* were a class of people mostly Mohammedans who had ointments that were taken to be the wonderful specifics for boils, gangrenes and other diseases. Some of the *Jarha* families are still to be seen in the towns and in the villages. The formula of the specifics they use are guarded secret but they are made of easily available herbs. Some of the village barbers were quite good in the surgical skill, as many people still think. They, however, did not use any antiseptic and their present clientele come mostly from the villages. Some families distributed particular specific for diseases like asthma, gout, etc., and the formula of these specifics were also close secret. The village *Chamains* were the traditional midwives and their services were invariably taken at the time of confinement in every well-to-do family. There is also a certain amount of belief in *Jharphunk* (exorcism) in cases of hysteria, snake-bite, etc. The *forte* of the *Ojhas* seems to consist in their persistent efforts to keep the affected person in a tension. The *Ojhas* would burn chillies and make the patient breathe that smoke, give him slaps or flog the patient with a cane and probably the idea is not to let him sleep. Fortunately most of the snakes are non-poisonous.

In the early days of British administration we find that an attempt was made to introduce the allopathic system of medicine and modern surgery as it then existed in the urban areas. Hospitals and dispensaries were opened in the urban areas first and then these institutions were spread in the interior. With the introduction of Local Self-Government, maintenance of public health became a major duty of the District Board and a number of dispensaries came to be opened in the interior of the district. For a long time the District

Magistrate continued to be at the head of the medical administration of the district although there was the Civil Surgeon for looking after the technical side. There was a lot of antipathy on the part of the people to take to the modern system of allopathic treatment and it was difficult to push in an injection or to make an operation decades before. But now the craze is to get an injection for a quicker cure. The British administrators also gave a certain amount of encouragement to the other systems of medical treatments, namely, *Kaviraji, Unani* and Homeopathic. Epidemics were fewer in the past but unfortunately the incidence of casualty if a virulent epidemic broke out was severe owing to the fact it took a longer time to reach the medicines to the country-side. Epidemics of plague were, however, rather frequent till a few decades back.

Vital Statistics.

The accuracy of the vital statistics depends on the village Chaukidar whose duty is to report the births and deaths to the local police-stations and monthly returns are submitted from the thanas to the Civil Surgeon of the district. The diagnosis of the cause of the death by the Chaukidar naturally cannot be relied on; if there is any doubt, it is generally attributed to fever. When the Chaukidar is himself attacked by any disease of serious nature the reporting probably stops altogether for an indefinite time. It is expected that with the spread of Gram Panchayats in the district, this inaccuracy will disappear. A second source of the vital statistics is the census records. Census is taken once in ten years. There are also occasional health surveys in particular areas or a survey of a particular disease condition. The reports of such health surveys also give some data for the vital statistics. But there have not been any such surveys.

The population of the district had increased steadily from the first census in 1872 till 1891 and then decreased for twenty years. From 1911 to 1921 there was a small increase, due chiefly to the fact that outbreaks of plague were losing their virulence.

Since 1912 the birth-rate has always exceeded the death-rate except in three years, namely, in 1918 when the death-rate was nearly double the normal owing to the influenza epidemic, in 1919 when the diminished vitality of the preceding year was shown in the abnormally low birth-rate and in 1921 when the difference was slight and was due mainly to an unusually high death-rate from fever after the flood of that year. Since 1912 the highest death-rate was 62.2 per mille in 1918 and the lowest 20.7 in 1923. The highest birth-rate was 47.6 in 1912 and the lowest 33.3 in 1919. The averages for the period are 32 deaths and 39.3 births per mille.

The population has steadily increased from 23,40,222 in 1921 to 2,48,673 in 1931, 28,60,537 in 1941 and to 31,55,144 in 1951. From 1928 to 1951 the birth-rate per mille of the population has throughout exceeded the death-rate per mille. The highest birth-rate was recorded in 1932 and 1936, viz., 38.05 and 38.45 per mille, respectively.

The lowest birth-rate was 20.53 per mille in 1948. The highest death-rate occurred in 1931 at 31.25 per mille while the lowest death-rate was 12.23 per mille in 1950 and 13.26 per mille in 1951. The average birth-rate per mille from 1930 to 1951 was 32.99 and the average death-rate per mille for the same period was 21.23 per mille. The statistics of the vital statistics from 1941 onward are given below :—

Year.	Births (Registered).			Deaths (Registered).		
	Persons.	Males.	Females.	Persons.	Males.	Females.
1	2	3	4	5	6	7
1941	94,308	48,740	45,568	53,176	28,632	24,544
1942	82,786	41,975	40,811	44,965	24,364	20,601
1943	69,441	36,844	32,597	42,750	23,169	19,581
1944	63,425	33,425	30,000	60,770	33,631	27,139
1945	67,815	35,442	32,373	64,562	35,839	28,723
1946	70,470	37,286	33,184	56,465	30,332	26,133
1947	54,073	28,674	25,399	52,561	27,030	25,531
1948	47,073	24,823	22,250	38,137	20,626	17,511
1949	52,030	26,412	25,618	30,318	15,518	14,800
1950	49,950	26,138	23,812	29,157	15,848	13,309
1951	Not available					
1952	66,762	Not available		40,315	Not available	
1953	70,459	Ditto		39,667	Ditto.	
1954	74,545	Ditto		37,063	Ditto.	
1955	77,122	Ditto		35,167	Ditto.	
1956	77,839	Ditto		33,213	Ditto.	

In 1941—1950 decade specially for seven years, public health in Saran appears to have been worse than at any time during the preceding ten or fifteen years. Cholera broke out in epidemic form in 1943, 1944 and 1945 and the average annual mortality from cholera during 1941—1945 was 3,153 as compared with only 590 in the previous decade. In 1944-45 fever also took a great toll of lives. Cholera occurred again in 1947 and 1948 and there was also increase in the incidence of plague which took an epidemic form in 1946 and 1947. The incidence of fever increased in 1952 and 1953 when mortality due to it came to 28,495 and 27,972, respectively. But in spite of the epidemics, the birth-rate throughout exceeded the

death-rate. The average birth-rate in the last quinquennium was 23.24 and the death-rate 11.75 per mille.

DISEASES.

Fever.

The highest mortality as mentioned in the last District Gazetteer (1930) is even now caused by fever. But this is more due to the ignorance of the village Chaukidars who are able to diagnose only well-known diseases like cholera and small-pox and many other diseases are indiscriminately classed under the general head of fever. Malarial fevers are not very common; cases do occur chiefly after the rains but it is not possible to say what proportion of the deaths could be attributed to other types of fever or due to malaria. Breeding places for malaria carrying anopheles mosquitoes are unfortunately common but many of them are temporary and dry up during the cold and hot weather. August and November are the months which see the greatest number of deaths from fever. The majority of cases which come under medical observation are of benign tertian character which yield readily to quinine and its various preparations. The incidence of black-fever or kala-azar is also not very great in this district. Cases of malaria and kala-azar are more found in the Gopalganj subdivision than the other parts of the district and are due to the proximity of Champaran where the incidence of these diseases is much higher. The number of deaths attributed to fever in 1918, the year of the influenza epidemic, was 68,676 or 29.9 per mille of the population; the death rate was also abnormally high in 1921 after the floods, the number of deaths being 42,217 and the rate 18 per mille. In 1923, the number of deaths from fever was 23,603. The highest mortality due to fever next to 1918 was recorded in 1931, the number being 42,480 or 17.09 of the total population. The mortality due to fever recorded a decline from 1949 onward, the death-rate being 7.5 per mille. The average death-rate between the year 1946 to 1949 was 9.6 per mille. The mortality due to fever of the recent years is given in the following statistics :—

Year.	Deaths.
1952	28,495
1953	27,972
1954	26,410
1955	24,834

From the above statistics it is apparent that fever is taking a great toll of lives every year; though the mortality had shown a downward tendency every year. The mortality due to fever was 8.9 per mille in 1952 as against 7.6 per mille in 1955 and the average death-rate between 1952 to 1955 was 8.4 per mille.

Cholera.

The epidemic of cholera was common in the past and is still not completely stamped out. Stray cases of cholera is reported every year. The cases usually occur after April and a flare-up is noticed near about October coinciding with the *mela* season of the district. Sometimes the diseases are imported from the neighbouring districts and the inter-State districts during the time of Sonepur fair when a large number of pilgrims from different parts of India and Asia visit the fair. Sonepur fair used to be an important source of infection but recently the epidemic has lost its virulence due to the improved sanitation and cleanliness, construction of bore-hole latrines in the *mela* area. The total number of deaths in this district due to cholera was on average 1,059.91 from 1930 to 1940. The highest mortality from cholera is recorded in 1930 and 1931, the total deaths being 5,277 and 2,017, respectively. The diseases broke out in virulent form in 1944 and 1945 when it took the toll of 5,879 and 5,553 lives, respectively, in the district. The incidence of cholera had fallen steadily since then and in 1951 as the figure recorded being 222. The average death-rate from 1946 to 1950 was 3.3 per mille. In 1952 the disease broke out in epidemic form and took 488 valuable souls in the district. The lowest figure is recorded in 1955 as only 7 deaths occurred due to cholera. In 1953 the figure of death was recorded 50 as against 153 in 1954. The death figure again shot up in 1955 when 259 lives were lost due to cholera.

The preventive measures are undertaken by the District Health Officer with the help of Assistant Health Officer, Health Inspectors and Sanitary Inspectors in the shape of disinfection of wells and intensive anti-cholera inoculation. But in spite of the sanitary measures undertaken by the Public Health Department the disease is not likely to be stamped out till many insanitary domestic habits of the people are radically changed.

Small-pox.

Cases of small-pox make their appearance every year but the virulence has not been as high as in cholera and fever except in exceptional years. Between the period 1930 to 1940 the total number of deaths due to small-pox was on average 1,013 whereas it was 904.6 between the period 1941 to 1951. The years of high mortality were 1932, 1933, 1936, 1940, 1950 and 1951. The highest mortality of 3,856 was recorded in 1933. The next epidemic to assume the devastating magnitude was in 1951 when the mortality went up to 3,122. The average death-rate between the year 1946 to 1950 was .18 per mille as against .62 per mille for the period 1930 to 1934. The disease again broke out in epidemic form in 1952 when 308 lives perished due to small-pox. The average death-rate between 1953 to 1955 was 36.

Vaccination forms the only strongest measure against small-pox. The people are now getting convinced of the efficiency of vaccination.

Primary inoculation is compulsory in the municipal areas and the Epidemic Disease Act is now enforced with greater rigidity. The mass vaccination and re-vaccination is given during the epidemics.

Plague.

Bubonic plague first appeared in the district, in a village in the south-east corner, in January, 1899. Owing to the prompt measures taken, the outbreak was confined to this one village and was stamped out by the end of March; but in September it reappeared in a neighbouring village and gradually spread westwards towards Chapra which became infected in March, 1900. It was epidemic in the district during the census of 1901 and in the succeeding next ten years it accounted for no less than 1,66,000 deaths. In 1914 there were 20,000 deaths; there had been no very serious outbreak since 1918 when the deaths numbered 10,227 or 4.4 per mille of the population the highest figure since then being 3,658 in 1922. Between 1930 and 1940 the incidence of plague had decreased, the lowest being 370 and the highest being 1,447. The mortality reached its highest peak in 1946 and 1947 when the recorded deaths for the district were 6,639 and 12,073. The worst suffered centres were Kateya, Mirganj and Bhorey in the Gopalganj subdivision; Basantpur, Siwan, Maharajganj, Guthni, Mairwa in the Siwan subdivision and Baniapur in the Sadar subdivision. A temporary 100-bedded hospital was started at Sepaya in 1947 to accord relief to the large number of patients. A cyno squad was posted in the district for combating the disease in 1943.

The epidemic of plague, owing to sustained effort of the Public Health Department and the consciousness of the people to resort to inoculation, has practically been eradicated from the district. A few stray cases had been recorded in 1952 and in 1954 which took the toll of 17 and 4 lives, respectively, in the district.

Other Diseases.

Apart from the principal diseases mentioned above there are diseases which also occur in the district and take a heavy toll of lives every year. The incidence of the treated diseases as recorded in the hospitals and dispensaries is given below :—

Name of diseases.	1948.	1949.	1950.	1951.	1952.	1953.	1954.	1955.	1956.
1	2	3	4	5	6	7	8	9	10
Kala-azar ..	15,917	14,419	12,250	12,296	12,115	11,986	10,088	10,989	10,925
Malaria ..	40,114	33,433	33,864	28,787	27,162	29,850	23,396	20,207	14,861
Filarja ..	1,479	1,622	2,453	2,763	1,882	2,012	2,125	2,485	2,921
Hookworm ..	5,912	7,396	8,252	9,897	8,105	5,982	7,883	7,515	7,118
Leprosy ..	1,659	2,908	2,212	2,056	2,112	2,553	2,322	1,833	1,942
Tuberculosis ..	2,524	2,624	3,796	5,411	6,850	2,453	3,398	2,579	2,637
Goitre ..	8,156	7,951	7,352	5,929	5,122	4,589	5,011	4,669	4,535

Goitre.—Goitre is more prevalent in the Gopalganj subdivision. The number of goitre recorded in 1935 was 18,646 and in 1942 it fell down to 10,627 and from 1948 it had showed downward tendency.

Tuberculosis.—The poor economic condition, hard manual labour in the struggle for existence, greater mental and physical strain owing to malnutrition are mainly responsible for the spread of the tuberculosis in the district. The figures of tuberculosis shown in the table are fluctuating and had appreciably been controlled.

Filaria.—The number of filarial cases seems to have apparently increased but this may be also due to the greater consciousness of the medical staff for holding filaria responsible for cases of scrotal tumour, hydrocele and unexplained painful swelling and lymphangitis.

Leprosy.—If the report of the censuses of 1921 and 1931 are any indication the incidence of leprosy is not big in the Saran district. At the census of 1921 only 497 lepers were recorded in Saran, mostly in the towns. The census of 1931 recorded 421 out of which 370 were males and 51 females. The infirmity figures have not been enumerated in the censuses of 1941 and 1951. But from the above-mentioned figures of the out-door patients it is apparent that the incidence of leprosy is greater than mentioned in the censuses of 1921 and 1941. Neither the census figures nor the figures of hospital and dispensaries lead us near the truth as it is difficult to diagnose the disease in its early stages and there is a strong tendency to conceal admitted cases. This bare truth is admitted by the Census Superintendent, Mr. Lacey, who has mentioned in the *Census of India,* 1931 (Vol. VII, Part I Report), published in 1933, that " The actual number of persons returned as lepers in Bihar and Orissa at the present census was 22,794 which is equivalent to 54 persons in every 1,00,000. In 1921 the number was 12,269 or 32 in every 1,00,000. It so happens that in the former occasion the proportion of lepers in this province was exactly the same as in the whole of India, and Sir Leonard Rogers expressed the opinion at about that time that in actual fact there were at least five times as many lepers in India as were shown in the census returns, while Dr. E. Muir went still further and proposed to multiply the census figures by ten. The views of these eminent authorities on leprosy have since received striking confirmation from a number of surveys carried out in different parts of the country by doctors who had received special training in the diagnosis of the disease ". He further mentions that " Among individual districts Saran is the only one to show a decline and the fact that the returns of deaf-mutism and blindness from this district are also much lower than before, while the increase in the case of insanity is very slight, leads one to suspect that the record of infirmities in Saran on the present occasion was not particularly successful ". It has, however, to be mentioned that there has not been a proper scientific survey either on leprosy or a study of insanity, ailments of thyroid, idiocy or moron condition.

From stray local enquiries it appears that the incidence of leprosy is greater in Jamo, Gopalganj and the Sadar subdivisions than other parts of the district. There is no leper home or clinic in this district and the cases are treated in out-doors of the hospitals and dispensaries. A leper subsidiary centre has been opened in Siwan under the charge of a trained Medical Officer where leprosy patients are treated as out-door patients. A voluntary social institution known as the Kusth Sevasram, Mairwa (Brindawan) has been started in 1953. This institution has received donations from the State Government.

Eye-diseases.—An average of 1,896 cases attend the dispensaries for the treatment of trachoma which is responsible for loss of eye-sight in a large number of cases. The old *District Gazetteer, Saran,* published in 1930, mentions that the blindness is more prevalent in Saran than any other districts of North Bihar except Champaran. The figures according to the census of 1921 were 96 males per 1,00,000 and 91 females per 1,00,000 as against 82 males per 1,00,000 and 80 females per 1,00,000 in 1931. The blindness figure is not mentioned in the census of 1951. From the records available in the hospitals and dispensaries it appears that the number of cases seeking advice in hospitals and dispensaries for treatment of cataract range from 887 to 1,989 in a year. Over 2,000 cases were operated in the various hospitals of the district from 1943 to 1951. Recently private Blind Relief Camps had been organised during the winter season in the various parts of the district and also at Patna for cataract operations. The figures for eye-diseases treated in the hospitals and the dispensaries of the district were as follows :—

17,821 for 1952, 20,903 for 1953, 21,232 for 1954, 26,312 for 1955 and 21,039 for 1956.

Hospitals and Dispensaries.

Organisation.—The Civil Surgeon is the administrative head of the District Medical Department and in his work he is assisted by several Assistant Civil Surgeons. He is in over-all charge of the work and administration of the State-managed hospitals and dispensaries. He also supervises the hospitals and dispensaries maintained by the District Board, Municipalities and others. The Civil Surgeon along with the District Medical Officer is responsible for the public health activities of the district. During the time of the epidemics he is responsible for checking the spread of the disease and to afford medical facilities to sufferers. The Civil Surgeon is also the chief authority in the district to enforce the provision of the drug control measures. He issues licenses to druggists and chemists and has also power to cancel them if he is not satisfied with their operations. He is expected to be more vigilant regarding sole distribution of sulfa drugs and antibiotics. As he has now been put in charge of public health section as well his designation is now Senior Executive Medical Officer.

There are altogether 31 hospitals and dispensaries in the district including the State-managed police hospital at Chapra. The description of some of the important hospitals and dispensaries is given below.

Chapra Sadar Hospital.

It was established in July, 1856, and provides an accommodation of 166 beds out of which 97 are for males and 69 for females. It was founded by public subscription and was further largely aided by a munificent donation from the late Babu Banwari Lal Sahu, a banker of the town. The hospital was provincialised in 1955. There is a separate tuberculosis ward which provides six beds for males and four beds for females. Besides there is a ward for the treatment of the cholera patients. The number of beds is not specified and accommodation is given to all cases of cholera. An anti-tuberculosis clinic was attached to the hospital in 1938 under the management of Anti-tuberculosis Association, Bihar. The clinic is looked after by an honorary doctor who attends twice a week. The clinic opens three days in a week and examines and treats all chest cases. The clinic has got arrangements for giving A. P. and for ordinary clinic examinations. A B. C. G. Vaccination Team visited the district and inoculated the students of the local colleges and schools in 1952.

The Sadar Hospital is equipped with an X-ray apparatus. The hospital is popular in the locality and remains overcrowded throughout the year. A large number of patients are operated every year for hernia, tumors, cataract, extractions, cæsacrean, overian cyst, laperotomic and other important operations. The strength of the medical staff in the Sadar Hospital is five including the Civil Surgeon and a Lady Assistant Civil Surgeon. The number of Nurses is two, Compounders three and Dressers three. The nursing staff is inadequate.

At Chapra there is a Family Planning Centre and Maternity and Child Welfare Centre; the former being attached with the Sadar Hospital under the supervision of a Lady Visitor while the latter is running as a private institution and the Civil Surgeon is the Secretary of it. The table below will give the number of treated in-door and out-door patients of the Sadar Hospital :—

Year.	In-door.	Out-door.
1952	1,599	268
1953	1,183	691
1954	1,507	1,290
1955	6,728	31,087

Subdivisional Hospital, Siwan.

The Siwan Subdivisional Hospital was opened in July, 1872, and was provincialised in 1955. The number of medical staff in 1958 was 3 including a Lady Sub-Assistant Civil Surgeon, two Compounders and two Dressers. The total number of beds in the hospital is 44 out of which 25 are for males and 19 for females. The figures of in-door and out-door treated patients are given below :—

Year.	In-door.	Out-door.
1952	1,200	19,736
1953	1,343	21,905
1954	1,222	21,240
1955	1,350	21,602
1956	1,790	21,270

Raj Hospital, Hathua.

The Hathua Hospital was constructed by the Maharani of Hathua in December, 1872. On account of financial stringency the Raj found it difficult to maintain it properly and consequently the hospital was maintained by the Revenue Department and it has been provincialised in 1955. The hospital gained much popularity since its inception owing to efficient staff and surgical apparatus. The hospital has four medical staff including one Lady Sub-Assistant Civil Surgeon. There are four Nurses, three Compounders and two Dressers. The total strength of beds of the hospital is 100 out of which 70 are for males and 30 for females. The figures of in-door and out-door patients of the hospital are given below :—

Year.	In-door.	Out-door.
1952	2,012	31,614
1953	1,661	29,627
1954	1,526	25,525
1955	1,578	22,244
1956	1,801	20,917

Subdivisional Hospital, Gopalganj.

The Gopalganj Hospital was established in April, 1873, and was provincialised in 1955. The strength of medical staff of the hospital is three including one Lady Sub-Assistant Surgeon, two Compounders and two Dressers. The total number of beds in the hospital is 52

with 44 for males and 8 for females. The figures for in-door and out-door patients are given below :—

Year.	In-door.	Out-door.
1952	860	20,513
1953	937	21,225
1954	1,092	24,663
1955	1,603	29,936
1956	1,531	33,926

Besides the four upper-most hospitals of the district excluding the police hospital at Chapra, the importance of Jamo and Marhowrah dispensaries comes next; the former being 8-bedded in-door dispensary while the latter had also previously the same number but since 1957 those dieted beds were converted into six emergency beds.

Out-door dispensaries.—The rest 24 dispensaries of the district only give out-door medical aid and they are situated at Bhorey, Chainpur, Khujwa, Mashrakh, Manjhi, Guthni, Baniapur, Dighwara, Kuchaikot, Maharajganj, Nayagaon, Reotith, Ekma, Barauli, Basantpur, Darauli, Kateya, Mairwa, Parsa, Sonepur, Goldenganj, Barharia, Revelganj and Garkha. The dispensaries of Darauli, Mairwa, Baniapur and Sonepur have been recently provincialised and all have provision of six emergency beds except Darauli, Manjhi, Garkha and Barharia, which has got four emergency beds each.

Besides, the North-Eastern Railway maintains a well-equipped dispensary at Sonepur for the treatment of the railway staff.

Other Institutions.

Out of 10 Blocks of the district Mobile Health Centres have been opened at Darauli, Kuchaikot, Baniapur and Andar in 1955 each with three sub-centres. In each Health Centre an Assistant Surgeon with three Health Workers, three trained *Dais* has been posted for giving medical facilities and sanitary advice to the villagers. Maternity and Child Welfare Centres at Chapra, Gopalganj, Siwan and Hathua have been opened. Each is staffed by a qualified trained midwife. There is a proposal to appoint a Lady Health Visitor in each centre. The midwife attends to children and the expectant mothers, distributes milk to children and the expectant mothers and conducts labour cases on getting information from the patients. The centres are visited by the Lady Doctor who gives anti-natal service at the centre in a week. A leprosy subsidiary centre is opened at Siwan for the treatment of lepers. A voluntary social institution known as the Kustha Sevasram, Mairwa, was opened in 1953. The Family Planning Centre, Chapra, is attached to the Sadar Hospital

Training of Compounders and Dais.

A course of training is imparted to apprentice compounders and dressers in the Sadar Hospitals, Siwan and Gopalganj and Hathua.

Training in elementary midwifery is given to *Dais* in Chapra and Siwan Hospitals. The *Dais* are granted stipend by the Government during the apprenticeship. They are in short supply along with nurses.

Indigenous Dispensaries.

Apart from 31 allopathic dispensaries there are 13 *ayurvedic*, 1 *unani* and 1 homeopathic dispensaries in the district. The indigenous method of cure is still prevalent in the rural areas. The costly allopathic medicines and its complicated diagnosis stages are beyond the reach of the people due to their poverty and for the dearth of the qualified doctors in the rural areas. Many unqualified Homeopaths, *Vaidyas* and *Hakims* and quacks are practising in the rural areas at the cost of the ignorance of the people. No doubt they do some good to the public but not unoften more harm is perpetrated by their ignorance; especially when with their own treatment they use injections and other allopathic toxic medicines the actions of which they do not fully know. The abovementioned *ayurvedic, unani* and homeopathic 15 dispensaries are under the direct control of the District Board and have been staffed by qualified physicians.

Normal pregnancies and labour cases are usually conducted by *chamains* or untrained midwives in the rural areas. The number of Maternity and Child Welfare Centres are a few and far between and have not yet been extended to the average group of villages. Some indigenous herbs, root and plants such as *tulsi* leaves, *chirchiri, bariara, gurich, pudina, bachas, regani* and *trifala* are widely used in the rural areas for the cure of the various diseases. Birth control clinics and its scientific methods are practically absent throughout the district.

Activity of the Indian Medical Association.

In the year 1938, nine Doctors of Saran enrolled themselves as the members of the Patna Medical Association. Later on when the Bihar Branch of the Indian Medical Association was started at Patna a separate unit was started at Chapra on the 2nd April 1938 named as the Chapra Branch. Now the strength of the number of the Chapra Branch of the Indian Association increased to 62. Not all the allopathic doctors of the district are members of this Association.

The members of the Chapra Branch of the Indian Medical Association help at times of emergencies like outbreak of cholera, small-pox and plague. The doctors of this district organised a relief team in 1942 in response to an appeal by the Inspector-General of Civil Hospitals, Bihar, to cope in time of emergency in the municipal area against epidemics. They also participated in delivering first-aid

lectures to the students and the employees whenever needed. The Chapra Branch of the Medical Association organise and observe its "health week" as an annual feature. During the week they arrange a series of popular lectures on the different subjects concerning with health, combined with cinema shows on the various aspects of the subject of health.

The number of registered qualified allopathic doctors in the district is 119, out of which 80 are in Sadar, 20 in Siwan and 19 in Gopalganj subdivisions.

PUBLIC HEALTH.

The District Medical Officer, for the purpose of Public Health Organisation, is the administrative head of the district. In each subdivision there is an Assistant Health Officer. Besides, there are 27 Health Inspectors, 105 Vaccinators and 54 Disinfectors for the maintenance of rural sanitation. There are altogether 10 Sanitary Inspectors to supervise the work of the Health Inspectors, Vaccinators and Disinfectors. The District Medical Officer is now under the Senior Executive Medical Officer-*cum*-Civil Surgeon.

SANITATION.

Rural Sanitation.

Rural sanitation is under the charge of the District Board from its very inception, but no effective measures have hitherto been taken for the improvement of it. It should be borne in mind that sanitation presuppose civic sense and wholesome habits of the inhabitants and so long they lack it the village sanitation will never improve. Rural sanitation suffers from several defects. Arrangement for latrines hardly exists in the rural areas and it is still considered a mere waste to have latrines for males. Consequently, they are constrained to have resort to promiscuous desecration generally by the side of village roads, ponds and rivers. *Katcha*-built latrines known as *sandas* are usually built for the women-folk. Secondly, houses are generally mud-built without proper arrangement for ventilation and drainage. Dirty water is allowed to flow out and accumulate in little pools which make the place muddy and filthy. During rains these pools serve as the breeding ditch for mosquitoes and flies. The household refuges are thrown improperly and are removed occasionally. Filtered and tap water has not as yet made much headway and consequently the people are constrained to drink and use the unwholesome water of tanks and *katcha* wells. Some improvements, no doubt, have been made in this direction where Block centres are functioning, but their number is a few and far between. Eighty-two *pucca* wells have up to 1957 been constructed by the Harijan Welfare Department for drinking purposes. It is expected that by the end of Second Five-Year Plan the whole district will be covered by the Gram Panchayats and by this agency, there would be appreciable change in the rural outlook and sanitation.

The activities of the Public Health Department to inculcate the villagers the value of sanitation and measures for prevention of the epidemics are appreciable. Efforts have been made to improve the village sanitation by constructing soak pits and composts and make aware the villagers of the value of civic sense through health propaganda which is being carried out through magic lantern slides and by health talks. Preventive measures carried out by the Public Health Department can be seen in the following statistics given below :—

	1953.	1954.	1955.	1956.	1957.
1	2	3	4	5	6
Primary Vaccination ..	72,811	97,219	97,674	1,11,645	99,997
Re-vaccination	1,86,382	2,69,548	5,96,500	8,95,266	5,56,494
Plague inoculation	3,816	978	6,423	3,120	98
Anti-cholera inoculation ..	4,05,426	1,05,522	2,09,088	3,80,299	2,73,866
Well disinfection.. ..	2,53,998	2,40,684	2,33,164	3,03,094	1,93,855

Sanitary Measures taken during Sonepur Fair.

Sonepur fair is the biggest cattle fair in Asia and is also considered by the Hindus a place of exceptional holiness and the *Ganga-snan* or ceremonial bathing in the Ganga unusually efficacious. But the great attraction of the place is the fair. It lasts for about a fortnight, but is at its height for two days before and two days after the bathing in the Ganga on the day of the *Kartik Purnamasi.* Several lakhs of people visit the *mela.* Apart from administrative control to check untoward incidents, the sanitary measures to prevent the spread of epidemics in the *mela* area and the neighbouring villages become all the more important. For proper control, the *mela* area is usually divided into several sections and daily the sanitation work is discussed by the staff of the Public Health Department. The Additional Director of Public Health, Tirhut Division, keeps vigilant eye upon the sanitation of the *mela* area. The Engineering Department of the District Board usually work in close co-operation with the Public Health Department.

Epidemic Control.—It would be dangerous to rule out the probability of the outbreak of the epidemics outright on an occasion where millions come. Due arrangements are made beforehand by the Public and Medical Departments along with the railway medical staff to meet any eventuality. All the wells of the contiguous villages from Palezaghat in the south and Parsa in the north-west are thoroughly disinfected before and after the commencement of the fair. The Government waterworks at Sonepur is also chlorinated. The dirty and waste water of the rivers Mahi in the south and Mehura in the north is regularly disinfected with poisonous germicidal drugs to destroy the virus of epidemics.

Conservancy.—Before the commencement of the *mela* a number of temporary latrines and urinals are constructed in the different parts of the *mela* area for public use. The number of latrines and urinals provided in the last three years was as follows :—

	1954.	1955.	1956.
Bore-hole latrines ..	1,000	1,023	1,200
Urinals	150	119	150

Considering the huge congregation of pilgrims the number of latrines cannot be said to be adequate. But instead of resolving the problem it is all the more rendered difficult by promiscuous desecration of the pilgrims. Three squads of scavengers are especially deputed for burying the night-soil scattered on the banks of the rivers Gandak, Mahi and Mehura. The roads of the *mela* area are regularly swept and washed.

Water-supply.—The Government waterworks at Sonepur is the chief source of water-supply for drinking purposes in the *mela* area. Besides it, a number of temporary taps and tube-wells are constructed to meet the water-supply of the *mela.* Besides, there are also 64 District Board and 111 private wells which serve the need of the *mela* population.

Food Control.—Measures are taken by the health staff to prevent the supply of adulterated food in the different restaurants and hotels. The suspected foods are sent for chemical analysis and the culprits are punished in the court of law. A slaughterhouse is maintained by the Government where goats are thoroughly examined by the Veterinary Doctor before slaughter. The slaughterhouse is kept neat and clean and usually 6 A.M. to 9 P.M. is fixed for slaughtering time.

Dispensaries.—In addition to permanent dispensary at Sonepur, three temporary dispensaries are usually maintained—one at *Mina Bazar,* other at *Nakhas* and the third at *Bailhatta.* Necessary anti-cholera drugs and B. P. are supplied in each dispensary. Steps are being taken to inoculate the pilgrims before entering into the *mela* area.

A great number of lepers are seen begging the charity of the passer-by in the outskirts of the *mela* area. A leper-shed is usually constructed in the south of the river Mahi as a measure against the spread of the loathsome disease leprosy, but in this the authorities are not successful since the lepers are seen frequently begging in the *mela* area.

The Public Health propaganda and exhibition of films concerning the health matters and sanitation are demonstrated with the help of lantern slides in the *mela* area by the staff of the Public Health Department.

Besides Sonepur there are a number of places in the district where fairs are held, which attract a large number of local people. The following table gives some particulars about these fairs :—

Name of fair.	Location.	Period of fair.	Attendance (approximate).
Dumarsan	Marhowrah	*Ramnawami* (20 days)	30,000
Baniapur	Baniapur	*Aghan Panchami* (15 days)	60,000
Silhauri	Marhowrah	*Shivratri* (7 *days*)	30,000
Maheundar	Siswan	*Shivratri* (7 days)	30,000
Thawe	Goplaganj	*Ramnawami* (20 days)	40,000
Hathua	Mirganj	*Dashara* (25 days)	30,000

In respect of fairs where pilgrims exceed 10,000 sanitary arrangements are made by the Public Health Department with the help of local medical staff.

Urban Sanitation.

The sanitation arrangements of the towns are slightly different from the rural sanitation. There is regular system of conservancy and the removal of night-soil and refuse of the towns. But considering the areas and population of the towns, the number of persons employed for the sanitation work seems to be quite inadequate. The Chapra Municipality has an area of 7½ square miles consisting of 64,309 souls according to the census of 1951 and this municipality has only employed 383 scavengers for disposal of night-soil and refuse of the town. Similar is the case with the other municipalities of the district. Like the villages, the towns also suffer from crowded and badly aligned block of houses, intersected by narrow lanes and consequently the incidence of epidemics is greater than the rural areas. The Municipal Boards of Chapra, Siwan and Revelganj and the Notified Area Committee of Gopalganj look after the sanitary arrangements in their respective areas.

Drainage.—In none of the towns of the district there is proper drainage system. The number of septic tanks for the disposal of night-soil is practically nil. The drains of the towns are *katcha* and remain silted throughout the year for want of proper desilting arrangements and consequently the household refuse water is allowed to accumulate on the narrow roads of the town. The condition of the roads become all the more awful in the rainy season.

Water-supply.—The chief source of water-supply even in the municipal area of the towns are wells. The sub-soil water due to the absence of rocks is available in abundance. Scarcity of water is

seldom felt in the district. Apart from wells hand-pumps are becoming popular. The Public Health Engineering Department has hitherto sunk 528 hand-pumps, and tube-wells in the rural areas of the district for drinking purposes.

Pipe water scheme in Chapra town has been introduced since January, 1956. There are two water towers, the capacity of each is one lakh gallon. The pipe line has been laid along the roads and the streets, the length of which is about 17 miles. The town is fed with 1,800 taps. Considering the teeming population of the town the system of water-supply seems to be inadequate. Besides, there are 1,130 deep and shallow wells, 1,037 tube-wells, 176 hydrants and the number of house connection 725. Tap water is also available in Sonepur. It cannot, however, be said that there are proper drainage, conservancy or water-supply arrangements in any of the towns.