

Chapter VI

Conclusion

Since times immemorial man is trying to control disease. It's he who is using his brain and energy to analyse and interpret the causes behind illness. Some times he found the answer to his health queries in cosmological perception, some times from anthropological prospective. To counter the disease he has developed various health systems. Since ancient times various systems of medicine were evolved by him all over the globe. Whether the Indian medical System of *Ayurveda*, *Sidhdhs* and *Yoga* is concerned or Chinese, Egyptian, Mesopotamian, Greek or Roman Medicinal sciences are considered, the basic notion behind all the medical systems remained the same: to cure disease and provide a better health condition to the masses. Thus before, commencement of the concept of "Public health" the very notion of public health was prevalent all over the world. Health of individual or of masses is of utmost important. The vitality of the same cannot be measured less than to social, political or economic aspect of any individual or State. For overall socio, economic or political development, foundation needs to be strong and that is health, for one and all.

Since ages health and medicines have been a significant part of the Indian tradition. If the Harappan people were highly concerned for their Hygiene and public health, Aryans are known for developing their own medical system which still has its importance in India in form of alternative medicinal system.

With the change in political authority, some changes in medical and health system were also introduced in India. In ancient times *Ayurveda* was the system of medicine which developed with the passage of time and served the masses for centuries. The

outstanding contribution of *Susruta*, *Charaka* and *Nagabhatta* made this system of medicine highly advanced to its time. Discovery of *rauwolfia* and surgery of organic transplant are the great illustrations for this. With the advent of Islam, *Unani* system of medicine was introduced to Indians. However, it does not end the earlier medical system. The meeting of two ocean of cultures also led to the nexus and exchange in system of health and medicine.

During the Mohammadan rule both *Ayurveda* and *Unani* system of medicine were practiced together. A great level of interaction and interchange took place between the two. Pulse examination, and concept of hospitalisation which was and is part of *Unani* medicine got absorbed in *Ayurveda*. Similarly *Ayurvedic* texts of medicine and surgery were translated into Arabic to be used by *Unani Hakims*. Both the systems owed their allegiance to religion and morals along with considering biological limitations of man and ecological conditions of its surroundings.

The next phase in the History of medicine in India was inaugurated with the coming of the Europeans. The period of Renaissance, which began at the end of the 14th century in Europe and lasted for about 200 years, was one of the most revolutionary and stimulating in the history of mankind. The revival of learning in Western civilizations brought great advances in human anatomy. This extremely helped in the understanding of human body and aided in development of surgical techniques and ultimately laid the foundation of modern medicinal system.

Further various discoveries in medical science in 17th and 18th centuries contributed tremendously with its knowledge in development, like how the blood circulates in the

body, anatomy of the brain and the nervous system and the clinical approach to medicine, etc, led to land mark changes in the European medical science. With the advent of European colonizers in India and Britishers in particular, all these were discoveries brought to Indian scene.

The establishment of British rule witnessed great changes in the age old practices of medicine in India. It subsided the *Ayurveda* and *Unani*; traditional system of medicine and placed allopathy instead of it. However, this transaction was neither difficult nor smooth. In the beginning of the modern system of medicine people showed resistance against it as they considered it against their religious beliefs and due to its harsh preventive and curative measures while dealing with the epidemic. However the biggest plus point which this medical science possessed was its speedy cure. It was the medical system of political master, which ultimately established itself firmly among the Indian masses. Where there was direct British rule, the new medical system was directly established and replaced the traditional one and where there was princely rule, with influence of Britishers over them it gradually got introduced in those areas as well. This was also the case of the Baroda State.

The State of Baroda ruled by Gaikwad dynasty (1734 to 1949) showed allegiance to the British rule. It readily accepted the virtues possessed by the foreign masters in socio, economic and political fields. Whatever they found good for their subjects they brought it into their ruling pattern. This was one of the vital reason why a number of reforms and advancement in social, educational and economic field took place in the Baroda State during Gaikwad rule.

The history of medicine in the Baroda State can be divided into two phases. . The first phase was traditional in nature when more of *Unani* and *Ayurvedic* system of medicine were in vogue i.e. up to 1875. Like in other parts of India, here also traditional system of medicine was replaced by allopathy, the modern system of medicine. The second phase attributed to modern system of medicine which established itself with the establishment of a proper and well organised medical department by Sir T. Madhavrao, Dewan of the Baroda State during the minority period of Shri Sayajirao Gaekwad III in 1876.

Before 1876 no organised medical system as such prevailed in the Baroda State. *Vaids* and *Hakims* were employed in the State but not for public services and all of them practiced privately either for gratis or for remuneration. There were certain *Vaids* and *Hakims* attached to the Gaikwad place to serve the maharaja/ruler and their relatives and the army. Their salaries depended upon the goodwill of the Mahahraja and the degree of confidence they placed in their skill. Along with their salaries they also occasionally received gifts and endowments for the valuable services which they rendered to the rulers and their family. In general the condition of the *Vaids* and *Hakims* in 1850s and 60s was flourishing. The census report of 1872 reflects that there were 572 practitioners; *Vaids* or *Hakims*, practicing throughout Baroda territory. According to the census of 1881 there was a slight decrease in the number from 572 to in all 523. But there was considerable decline in these native practioners from year to year owing to the opening of hospitals and dispensaries of western medicines. Number of *Vaids* and *Hakims* were retired from their services to the State from 1875-1877. However, Maharaja Sayajirao III showed his sheer interest in restoring them to services by introducing new schemes in medical system and later

opening various Ayurvedic dispensaries at the divisional level. To some extent he even succeeded. However, the native medical system and practitioners never gained the same status what they enjoyed previously.

The Medical Department was established in 1876 by the collective efforts of Dr. T. Cody and Sir T. Madhavrao but even before the inauguration of the new department based on western medical system the elements of the western medicine were present in the State. In July 1855, a hospital was opened in the western corner of the city of Baroda and placed under the superintendence of the Residency surgeon, Dr. Stratton. It was during the reign of His Highness Khanderao Maharaja, that two medical institutions attached to the battalion at Dwarka and at Dahri where, European medicines were kept were opened. It is also submitted by the then *Vaids* and *Hakims* that Maharaja Khanderao himself possessed good knowledge of Western Medicine and specially surgery. However, due to lack of proper administration, Khanderao failed to provide an efficient system of medicine but undoubtedly it was he who inaugurated modern medical system in the Baroda State.

Keeping the need and health requirement of the State a draft plan was prepared by Sir T. Madhav Rao in 1876. It comprehended the plan of opening Hospitals at each Suba level and Dispensaries at taluka level. The health arrangement for palace, Jail, public servants, military force etc. were also exclusively incorporated. It also had the provision for midwifery, inquest, vaccination and special arrangements to deal with epidemic of Cholera. On the basis of the requirements the whole medical organisation was made and it started to function from 1881.

The Medical Department constituted of administrative, executive and subordinate staff. The main function of the department was to provide Medical and Surgical aid to the public, to advice the Government on matters of public health, to popularize the use of Maternity institutions in the State, to train Nurses and Midwives for the State Service, to adopt preventive and curative measures against the prevalence of Epidemics, to undertake Medico-legal work, to undertake Chemical and Bacteriological analysis of water to be supplied to the public, to examine the school-children, to hold classes in Ambulance, Home Hygiene, Nursing, etc. and to hold Medical Boards for Civil and Military servants.

It was the Chief Medical Officer who was the head of the Department appointed by the Gaikwad ministry. The Deputy Chief Medical Officer and Principal Medical officer, State General Hospital, Medical Officers of first and second grade, Medical Staff attached to State General Hospital, comprising Medical Officers in-charge of Hospitals, Surgeons, Sub Assistant Surgeon, Nursing Sisters, Lady superintendent, Medical Officers in-charge of Hospitals and Dispensaries, Physician attached to the Palace and in services of Maharaja, Radiologist, Chemical Analyser, Medical Storekeepers, etc. were the main employees in the services. Their duties, responsibilities and pay structures were clearly laid down and from time to time changes in salaries by introduction of gradation schemes and allowances were also introduced.

At the beginning of the system people did not appear to appreciate the new arrangements which was made by the ministry but gradually it was accepted and adopted by the common masses. Year by year the number of patients treated in

various medical institutions increased and they started developing faith towards new medical system. The Medical Department was fortunate to have great medical officers in its services. Whether it was Major Dr. T. Cody, Shamssudin Sulamani or Dr. Jivraj Mehta. Such legendary doctors in the medical services of the Gaikwad State proved highly useful contribution in establishing and popularising new medical system. They played important role in discovering new medicine to be used during epidemics and creating mass awareness on primary health education i.e. about the importance of child care and home hygiene, maternity care, etc. It is a matter of honour to the Baroda State and medical department that Dr. Jivraj Mehta, the first Chief Minister of Bombay State after independence of India, served as CMO in 1924 and played a pivotal role in creating awareness among the masses on the issues pertaining to maternity, child health and hygiene.

The facilities of providing Lunatic Asylum and Leper Asylum by the Gaikwad State are worth mentioning and reflects the special concern of the State towards their masses. When in the whole of Western India there were hardly one or two Leper Asylums, the State of Gaikwad was one among them to provide this rare facility since 1890 to their subject and to the subjects of princely state and British provinces of the adjoining areas. Similarly it had Lunatic Asylum since 1898 and where insane from Baroda as well other countries got treated. The Baroda State had very clear and obdurate policy in respect to admission and treatment of the lunatics and the lepers of foreign countries.

The Rural Medical Relief and Baby Week Celebration in Baroda State also deserves great appreciation for making it a mass movement. In this mission the State was not

only assisted by the Medical Department but also by the influential people of the respective village or taluka who provided a good amount of donation for that purpose. When the Baby Week celebration were inaugurated in 1924, to inculcate active participation of masses, a number of competitions were organised in which prizes were distributed to the winners. For purchasing the prizes people from the Medical Department and other higher official attached contributed monetarily to purchase the presents. In a similar way to open dispensaries in rural areas, monetary as well as infrastructure facilities were donated by the elite persons belonging to that area. Matters pertaining to women's health were taken quite sincerely by the State and a sincere approach was taken by the State to improve the health condition of women and infants. The system of midwifery was encouraged since the emancipation of the department and amendments and alteration were made time to time in it to suit with the needs of situations. Dais Act, Chimanabai Maternity Relief League, Kanya Vyayam Shala and four infant Welfare Centers etc. are worthy to be mentioned in this regards. Along with this several articles were published in the local news papers and pamphlets were distributed in the city on the subjects of Maternity and Child welfare and Sanitations.

The Sri Sayaji Rao Hospital justifies special mention without which history of medicine of Baroda cannot be considered complete. The Sri Sayajirao General Hospital (SSGH/ SSG Hospital)Baroda was first started in 1886 with 56 beds in the name of Countess of Dufferin Hospital. Basically SSG hospital is a culmination of three important medical Units of that time i.e. Countess of Duffrien Hospital, Sayaji Military Hospital and State General Hospital. The old Military Hospital was built in 1876-77 and now it was converted into Paediatric ward. Keeping the growing

necessities of the people in mind, the State General Hospital was planned to be filled with modern equipments to meet the necessities. Today it is the largest Hospital in Central Gujarat, catering to the needs of 5 lakhs patients out door and 49, 000 indoor patients annually. High-end surgeries such as endo-urologic surgeries, laparoscopic surgery and plastic surgery are noteworthy. Thus, all types of advanced facilities in various sub disciplines of medicine and surgery are available in the SSG Hospital campus itself. In the research and education it is playing an outstanding role for the whole of Gujarat. The Medical College Baroda & the M.S. University of Baroda also houses the Schools of Physiotherapy and Nursing studies attached to this provided great impetus to the medical learning. Thus, it can be considered a model Hospital for any present State and the credit for this solely goes to the efforts of Gaikwad Rulers specially to Maharaja Sayajirao III and his farsightedness.

The Baroda State put lots of efforts for the development of modern medical system in the State. The two essential reasons behind this were, first reformist and modernist attitude of the government and second the State visited by numerous epidemics frequently. The environmental causes, way of living including poverty and related social conditions like poor sanitation were common reasons of illness and sporadic disease which effected the mass in bulk. History of illness in the Baroda State can be understand under two spheres, prevalent disease which were prevailed throughout the year and Epidemic which visited Baroda State with the intervals. Since the beginning of the twentieth century a proper records of the disease which prevalent as well as sporadic disease was maintained by the State. The general disease which were prevalent throughout India were found here in the State as well, like malarial fevers, affliction of the respiratory organs and alimentary canal, syphilis, cutaneous

diseases and rheumatic affections along with venereal disease, disease of nervous system, of eye, skin, ear, lungs, worms, dysentery, etc. reported regularly throughout the territory of the Baroda State. In all the four divisions of the Baroda State the most rampant and common disease was Malarial fever. After Malaria, diarrhoea, bronchitis, skin diseases were the most occurring diseases in Kadi and Navsari Division. In the Baroda Division affliction of respiratory organs and elementary canal, syphilis, cutaneous disease, rheumatic affections were most prevalent diseases. While in Amreli division due to the various climatic changes it is found bowel complaints, rheumatic affections, and eye diseases in the hot weather and Lung disease in the cold weather. Okhamandal being a coastal town and due to pilgrims movement it was prone to sporadic disease like cholera and smallpox. The climate, habits and the customs of the people as mentioned earlier were the chief causes of the prevalent diseases as climate played a main role in the spread of Malarious disease all over the territory.

The next in category of the disease is epidemic which means a type of disease affecting many people at the same time because of similar causes. Dominion of His Highness of Gaikwad was prone to the epidemic diseases in nineteenth and first half of the twentieth century. Plague, Cholera and Smallpox were the three main epidemics which spread in the Baroda State and cost heavy toll of life in this time period.

The epidemic of plague is one of the oldest diseases in the history of mankind. It is mentioned in Bible and in Bhagvat Puran. Plague is generally known as Black death or Mahamari. It visited India in the medieval period specially at the time of

Muhammad-bin-Tughlaq in 1325 and in 1617 during the reign of Mughal Emperor Jahangir. In the nineteenth century two severe outbreaks of plague were recorded during 1812-21 and 1895 which lasted up to 1907. The severity of plague continued throughout India from 1907 to 1918 and remained a major problem until the mid 1940s. In the Baroda State it was in 1896, 1924 and again in 1927-28 that plague broke out.

The first imported case of 1896 in the Baroda State occurred in Navasari and it was imported from Bombay. Except the one imported into Baroda which was from Surat, all the other divisions received the infection from Bombay. Navasari was the most infected division of the State while Kadi was the least infected region during this epidemic.

From the beginning of the twentieth century a proper watch was kept over the spread of the Plague, number of cases as well as deaths annually recorded up to 1948. The medical department and various communities both provided facilities for preventing the disease. It was also seen that, when the State was putting all its effort to control the spread of epidemic common mass failed to understand the efforts of the Government. They considered it as unnecessary interference by the State. This also resulted in the break out of riots, exclusively in some areas of Navasari division. On the other side it is also observed that Mahajan Community, Mohammadan community and Parsi community played noteworthy role in providing facility of treating Plague. Hospitals for plague for their fellowmen as alternative to the State Plague Hospitals. A Number of Public buildings were used to convert into temporary plague Hospitals.

In dealing with epidemics, prompt action were taken by the State. The subordinate officers were duly intimated by the head of the Medical Department and Sanitary Department about the same. The guidelines were provided and issued in the Medical Code of the Baroda State time to time with amendments required. Prohibiting access to the town or to village of person coming from infected area vigilance were kept at the entrances of the town and villages and Railways stations. Camps were erected at the entrance of the town to examine persons coming from the infected areas. As the State took strict and drastic measures during the break out of the epidemic some time they became unpopular also. The preventive measure isolation of the sick, segregation of contacts, disinfection of personal effects and compulsory notification of both imported as well as indigenous cases in the beginning of an epidemic and prohibition of caste-dinners and other large gathering, etc were not appreciated by mass. Burning of the hut and all the rubbish and fumigation of the room occupied by the sick were conducted by the State as another preventive measures made the department unpopular.

In the year 1917-18 the epidemic of plague assumed a very severe form with a daily average of about 30 attacks and 25 deaths. Inoculations compared to previous epidemic, it was gratifying to note that the people came forward more readily for inoculation both in the city and in the districts and they realised the efforts of the State.

After three years, again hundreds of cases of plague were reported. Plague continued to broke out in some or the other area up to 1935. In 1935-36 no case of plague was found and to prevent the out break rat catching operation continued in various parts of

the State up to 1946 in the plague prone areas like Petlad, Dharmaj, Gandevi town and Okha.

After Plague it was epidemic of cholera which killed millions of people in India in nineteenth and twentieth century. Like plague the History of this disease can be traced from ancient time. In Ayurveda it is mentioned as *vishuchika* and mentioned in "*Sushruta Sanhita*" also . Since modern time six pandemic of the disease occurred and the seventh epidemic is still continuing.

It was in 1875 Cholera broke out in the Baroda State in severe form. The State took all sort of measures to prevent the disease and even the assistance of local *Vaids* was also taken by the State to cure the disease. 1879-80, 1881 and 1915-1916 are the years when the epidemic was recorded. As a preventive measure thousands of inoculation were done every year and doses of billi- vaccine were distributed. Further free distribution of preventive and curative medicine was sanctioned by the Government. Alike Plague inoculation and fumigation of the infected areas as preventive measure was also adopted by the State.

The Baroda State was also a victim of smallpox several times and the treatment preferred for it was both indigenous religious belief of worshipping *sitalamata* etc. and use of western medicines. It is found that daily reports on the occurrence of cases were reported from the prone areas to the CMO. Small-pox broke out from 1888 to 1890 and again from March 1891 to May 1892 in the various parts of the State except Navasari. The year 1934-36 again reports the severe outbreak of the Smallpox

in the State. Vaccination and revaccination at the age of 8 was made compulsory in the Baroda State to fight with the epidemic.

The disease and medicine in the Baroda State cannot be understood in its totality without taking note of Public health and hygienic condition. While surveying the condition of Hygiene and sanitation of India in the twentieth century it is found that majority of the population of India resided in the village and surrounded with filth and unclean milieu. The condition of such villages becomes pathetic at the time of monsoon which ultimately led to the outbreak of various sporadic diseases.

In India public health administration began since 1869 with the establishment of Sanitary Commission but still it took lots of time to reach to eradicate such unhealthy conditions. Even today a number of villages in India are not appropriate from the health and sanitation point of view even after various government policies, commissions and health Plans.

The State of Baroda once again expressed its concern for the development of the public health. This is reflected from the numerous instrument adopted by it periodically. Vaccination and hygienic work were encouraged and promoted by the State. Whenever any epidemic broke out as mentioned earlier two fold measures of curative and preventive actions were undertaken. Medical Department and sanitary department worked hand in hand with each other to come up from the health, hygiene and sanitary problems. A systematic and organised progress in this direction was started with the establishment of Sanitary Department of the State in 1891. The basic duties performed by this department were to supervise the sanitary condition and

make regular inspection at village and taluka level and suggesting the measures for the improvement in the prevalent condition. Registration of Birth and Death and Vaccination was another important job performed by it. Creating awareness among the masses regarding various health issues, like Maternity care, infant care, upbringing of child, how to keep our surroundings healthy and clean benefits of that performed jealously. Basic methods to be adopted during the time of out-break of the disease etc. were addressed by the Department.

Further more Health Regulation or *Arogya Rakshan Niyam* were also issued by the State towards an organised initiative to deal with problem of public health. The most important work done under this rule is the isolation of the manure pits. Further rules for cleaning wells, regulation of fairs and similar other matters were also made in 1901.

Since 1879 the returns of birth and death were introduced in the Baroda State. Up to 1901 it were recorded by the Village Patels or Village Headman and in the town it was the duty of the police to register the Birth and death. They had to send monthly records to the Vahivatdar of Taluka and his duty was to send the same further to the Sanitary Commissioner. Though the system was there but not worked efficiently at that time, probably due to the lack of awareness and importance of the same not realised by the common mass. By 1901 new rules were framed by which the duty was allotted to the Municipality in town and to the village headman in the village. Even upto the 1920s the people remained ignorant to the system as they considered it unnecessary interference in their domestic life. However event after so many difficulties, from 1894 to 1948 major causes of the death per mile population was

also recorded along with birth and death. This gives a clear insight about the major cause of death in the region. By the report it was found that fever was the main cause behind most of the death in the Baroda State.

Another important work done by the sanitary department was the vaccination of children. Even before the commencement of the department vaccination was introduced since 1847. Thus vaccination department existed even before the sanitary department in the State. During the time of Sir. T. Madhavarao it was reorganised and kept under the Medical Department by 1880-81 and after the organisation of Sanitary Department it was placed directly under the Sanitary Commissioner in 1891. The Vaccination was made compulsory in the city of Baroda in 1914 and by 1946-48 it was found that Vaccination before the child is 6 month old and revaccination at the age of eight or at the time of registering the names of children in school for the first time was made compulsory in the whole Baroda State to deal with various diseases prevalent in the children and mainly smallpox.

The Sanitary department in the Baroda State played a vital role in improving the public health. Vaccination and revaccination for Small-pox and awareness programmes run by it throughout the territory in the form of delivering lectures by the sanitary officers, publication of articles on the dietary habits, showcasing of lantern and cinema show and health exhibitions deserves the great appreciation on behalf of the State.

To take care of nutrition habits and food issues, Public Health Laboratory was also established by the State in 1938 under Sanitary Departments observation. Its basic

function was to study the dietary habits of different classes of population in the State and examine the milk and milk products. For preventing the adulteration of milk, ghee and butter, rules were published. A number of samples of milk and ghee were examined in the Food Laboratory and reports on the same were duly published by the State.

Thus, whether it is a medical department or sanitary department or measures adopted by the Baroda State to deal with epidemics and create mass awareness of the role played by the Gaikwad State deserves great appreciation. If we say that vitality of health cannot be measured less than socio, economic and political aspects of the State, the Gaikwad rule is noteworthy example of that. With its efforts they literated their masses from health point of view and played an important role in changing their attitude towards the disease when people gradually started looking towards the disease from rational and scientific point of view rather than following the old superstitious beliefs. Though hundred percent result are still awaited but the initiation and the foundation laid in this regards by the Baroda State is appreciable.