History of Public Health Upto 1947
Chapter - 1

HISTORY OF PUBLIC HEALTH UPTO 1947

"What serves it if a man gains the world and loses his own soul" is a popular saying in the Holy Bible! The concept of Public Health was found in the earliest evidence of communal living. The early homosapiens or hunter-gatherers, suffered from the same diseases that afflicted people today. World Health Organization had defined health as “A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”.

When civilization advanced, man became heir to a vast number of diseases attributed to tropics. People were ravaged by plague and decimated by malaria, cholera and other diseases. Most of the diseases were of global occurrence and were worldwide in their distribution. Among the three terrors; sword, famine and disease, the first to threaten and control mankind is disease.

Early diseases were attributed to forces of nature or fury of God. In all early civilizations, the conception of diseases was traced. When people led a nomadic tribal life as a group, rapid spread of communicable diseases took place. Primitive societies provided an organized approach to the recognition and management of diseases. The ancient cultures of Crete, Egypt, Persia, Babylonia, Greece and Rome describe sufferings from pestilence and disease. Cleopatra is supposed to be the first human victim of syphilis.

The occurrence of diseases like syphilis and leprosy was felt only in the second half of the nineteenth century and sources of different diseases could be isolated. Leprosy, a chronic infectious disease of the skin tissues or nerves is discussed in the Holy Bible. Another great name in the history of medicine was Galen whose explanation was accepted throughout the ages. According to Hippocratic School, our body possesses four humors –
the blood, phlegm, yellow bile and black bile, a right proportion of which constitutes health and an improper one, distribution of disease. Vaccination was unknown to Europe before the eighteenth century but it was known to the Indians as early as 550 A.D. Diseases like syphilis, malaria, leprosy, small pox, cholera, plague were rampant in all parts of the world for centuries together. The death toll of the diseases was infinite.

During the medieval period, the bubonic plague ravaged Europe, Africa and Asia with 20 to 30 million causalities. The untold deaths from epidemic diseases throughout the world revealed that much remained to be known before control measures could be undertaken. Islamic medicine was the medicine of Europe in the middle ages. It was Anton van Leeuwenhoek who invented microscope and confirmed the presence of a disease causing organisms transferable from one individual to other to produce illness called communicable or infectious diseases. Until the germ theory was recognized, health officials of India believed that poisonous chemical brought about by weather conditions caused diseases. In the pre-colonial period pestilence had occurred without causing much damage to the people. Colonization was responsible for frequent outbreak of epidemics. For instance, plague ravaged Europe under the name Black Death since the time of fall of the Roman Empire and was common in England. Periodic epidemics of plague had decimated the population.

Based on the incidence rate, diseases are described as normal or endemic which cover places with in sanitary conditions. When the incident rate excels the normal it is termed epidemic and when encompasses large sections of the world it is called pandemic. The effective control of communicable diseases depended on case detection, notification, isolation and treatment of cases and epidemiological investigations. The facilities available for each of these facets of epidemiological services were inadequate prior to independence. The social and environmental dislocation along with a weakening public health care system had led to a resurgence of communicable diseases.
Birth of Public Health

The concept of concern for Public Health emerged in England as many towns in England were devoid of proper water supply and drainage. Houses were closely packed without proper sunlight and ventilation. The streams were polluted and foul smelling. There was no arrangement for the disposal of garbage. In 1831, a severe cholera epidemic swept London. Further, the situation was aggravated by the migration of people without sanitary convenience. The healthy way of life depended on preventing disease, either individually or in a community and thus the term Public Health involved in 1848 as a law under the name Public Health Act in England. Till 1850 medicine was restricted to only treatment of diseases.

Due to the Industrial Revolution, factories were established in cities and people from rural areas migrated to cities to work as laborers. No sanitary arrangements and water supply were made and that led to the big epidemic of cholera. There was a rise in infant as well as maternal mortality rates. A change in approach from negative to positive health and significance of environment in causation of infectious diseases were evolved.

In the nineteenth century, it was found out that certain diseases were caused by pathogenic micro-organisms. It was also discovered that such harmful microbes are transmitted from patients to healthy people. From the Latin word 'infico': which means to infect, the word infection was coined. The Government had the responsibility to provide public health services to control epidemic and thus public health emerged. In olden times, surgery was attempted with great risks and plagues and pestilences swept over every part of the world in periodic succession. The nature of epidemic diseases was obscure and mysterious. It was Louis Pasteur who lifted the veil of mystery by preparing a vaccine and injected healthy sheep and oxen and found that these vaccinated animals became immune to diseases. This was the beginning of
preventive medicine. A German Commission under Robert Koch discovered the Cholera comma bacillus. His discovery was a significant contribution to the germ theory of disease causation. The detection and isolation of different germs causing diseases led to the emergence of bacteriology. Consequent development in immunology and parasitology provided public health workers with the tools to study and understand epidemic phenomena. A new era of rational public health was established.

Many of the sailors were killed due to scurvy and James Lynd discovered that the disease was due to Vitamin C deficiency. The First World War was a turning point in the development of public health in British India. It caused considerable disruption of medical services since medical officers were sent abroad to serve in the army. Edward Jenner of England found that smallpox could be prevented by injecting cowpox vaccine and thus organism causing diseases was discovered and preventive measures were undertaken. The Medico-psychological association, the oldest association in the world which dealt with mental diseases and allied subjects, was formed in England with royal charter from King George V in 1926.

Health Services

Public health services in India were the responsibility of the state. The first landmark of health services was the appointment of the Royal Commission in 1859 to enquire into heavy mortality in military and civil population of India. As per the suggestions of the Commission, Public Health Commission was established in Bombay, Calcutta and Madras. No comprehensive policy with regard to the development of preventive health services was laid down. One of the special departments of the government was medical administration and sanitation created in 1861 in each province. In 1863 Sanitation Commission was formed and public health services were initiated through municipal and local boards. Sanitation and
Vaccination departments came under the control of the medical department in 1875. Sanitary commissioners were appointed to look after the health of the people of Indian towns and villages. This affected substantial reduction in mortality and sickness among the Europeans and Indian troops. Indeed the British had brought sanitary science to India. During 1875-76, the control of vaccination department was transferred from medicine to sanitary department. In 1880 it was decided that the offices of Inspector of Vaccination and Deputy Sanitary Commissioners were constituted and they had a responsible role in the sanitary administration.

The oldest organization in public health was the All India Institute of Health and Hygiene at Calcutta established in 1882. In 1883 the district surgeons were appointed as district medical and sanitary officers. They performed duties regarding medical and sanitary advice to Collectors and supervise vaccination. The Indian Medical Service was formed in 1896 and those selected were to join the military service in England. In 1899 the government sanctioned constitution of Sanitary Board consisting of Sanitary Commissioner and the Sanitary Engineer. The Board was later substituted by the Public Health Board in 1920 consisting of Minister of Public Health, local self government department, Deputy Secretary, Surgeon General, Director of Public Health, Chief Engineer, Public Works Department and the Sanitary Engineer.

The second landmark of health services was the Plague Commission report of 1904. It had recommended the establishment of laboratories for research and preparation of vaccines and sera. Minto Morley reforms of 1909 decentralized the medical services and gave it to the provincial governments with additional health officers in districts. In 1911 a Malaria Board was created to carry on field work. It was amalgamated with the Public Health Board. The outbreak of the First World War in 1914 was a turning point in the development of public health in India. The officers who returned from abroad after serving the Indian Army came with new aspirations concerning maternal and child health.
The post of Director of Public Health was created and medical services were bifurcated at all levels. Public Health Department was started in 1923 for the prevention and control of communicable diseases and improvement of health conditions of the state.\textsuperscript{18} The health institutions like the National Institute of Communicable diseases, Indian Medical Council, Central Committee for Food Standards, Drugs Technical Advisory Board, Pharmacy Council of India and the National Academy of Medical Science provided immense service.

**Research Activities**

Several institutions in India had undertaken research activities in medicine and public health. Medical research laboratories were intended for the study of health problems in India on the basis of bacteriological experiments.\textsuperscript{19} During 1869 investigations were done on cholera and malaria and later on *kala azar* and *beriberi*. The year 1883 marked a major breakthrough in scientific investigation into disease causation. When the new scientific discipline emerged the British did not take notice of it, but they were shaken by the occurrence of plague. It was remarked that what cholera did for sanitation in England, plague did for medical research in India.

Organized medical research dates from 1894, when the Indian Medical Congress moved the Government of India to establish and endow a research institute. The Plague Research Laboratory at Bombay was set up in 1899 for the manufacture of plague and cholera vaccines. Later it was renamed as Haffkine Institute in 1926.\textsuperscript{20} Charles Donovan in Madras demonstrated the presence of parasite in the spleen of patients suffering from *Kalaazar*, a disease similar to malaria. In 1906 the Central Research Institute was established at Kasauli. The Pasteur Institute was set up in India, at Coonoor in 1907, at Rangoon in 1915 and at Shillong in 1917 for the manufacture of vaccine against rabies. The institute had the capacity to produce vaccines as per world health organization standards.\textsuperscript{21}
The Rockefeller Foundation, London provided the impetus and financial resources to initiate public health professional education. With its aid, a Virus Research Centre was set up at Poona for investigation and control of diseases. The School of Tropical medicine was set up at Calcutta in 1920 and in 1932 the All India Institute of Hygiene and Public Health was opened. Between 1940 and 1955 a major therapeutic revolution with high rate of drug discovery was witnessed by the introduction of several new path breaking drugs like penicillin, streptomycin and cortisteroids.

Health Traditions

In its long existence, every society has evolved its own health care system. Traditional medicine was the oldest and most compact of medical systems of the world. It had different schools like ayurveda, yoga, siddha, tantric and folk medicine. At the primitive stage man treated the ailing people through magic, folklore, customs, torture, exorcising of evil spirit, charms and amulets. Whenever epidemics broke out they performed magico-religious rites along with herbal medicine for cure. Ancient man consumed raw vegetables and fruits and imitated the action of animals which ate plants for ailments. Indian tribes cured malaria with herbs and sandal paste and ointment. The religious concept of disease, prevalent in India, reveals its causation as God’s wrath, climatic influence, epidemic constitution of the atmosphere and contagion by case to case transfer. The ancient practices to fight the air and water borne diseases included cow dung and urine, easily accessible and powerful germicidal products known to Indian housewife but they also harbored dangerous germs. The worship of Goddess Ganga led to avoiding water pollution, the way of warding off diseases. People used to administer various herbs, metals and animals as medicine to cure their diseases. With the progress of time they indulged in deep medical research. It led to the emergence of various superficial and empirical systems.
Medical practice varied from place to place during ancient times. The Siddhas founded Siddha medicine and the Unani originated in Greece enriched by Arabs and Persians and Homeopathy was devised by German physician Samuel Hahnemann.

Unani – Honoured and sung by Urdu speakers
Ayurveda – Analyzed and codified by northern speakers
Allopathy – Researched and formulated by Westerners
Siddha – Contributed the Siddhars who were Tamils to humanity.

The Hindu medicine was restricted by tradition and thus the Indian system remained stagnant. The Rock Edicts of Ashoka at Girnar mentioned about medicinal herbs for men and beasts and when not available were imported and trees were planted. Some doctors used rhubarb with cumin seeds, lime water or rose water for treatment of bowel diseases. The tribals had their own system of treatment, a mixture of religion, magic, science and tradition. The local people used rice water along with milk.

The medicine men were community doctors and leaders of the tribe. To meet the needs of the staff of the East Indian Company, Indian Medical Service was started in 1740. The physicians and surgeons from Great Britain joined the service to train local assistants and dressers who constituted subordinate medical services. They were consulted only when needed. The arrival of the English physicians as ship surgeons and the training of assistants to serve as dressers to protect the health of British army
and civilians, prepared the way for furtherance of western medicine in India. To provide medical care vaidyas and hakims were recruited as barefoot doctors.

With the advent of the Muslims, the Ionian Greek and Arab medicine came to India and simultaneously Ayurveda and Unani too developed. This treatment was successful among the poor people with economical treatment and with no side effects. The foundation for the western medicine was laid by the Portuguese with the establishment of Royal Hospital in Goa in 1510. The first seed of Western medicine was sown by Sir Thomas Roe in the court of Jahangir. The British doctor William Hamilton had cured Farukh Siyar of a disease which enabled him to get commercial privileges. The East India Company wanted to continue Ayurvedic and Unani systems but during the great famine of 1770 A.D, the Indian system of medicine was less used to combat diseases, pestilence and deaths. Microbial diseases from the West could not be tackled by traditional medicine, but it had efficacy in other diseases for which there was no western remedy. The English were totally indifferent to the matters of health, disease and medicine. They suggested their officials to consult the local medical men when needed. The Homeopathic system of treatment was first introduced in India in 1839 by Dr. J. M. Honigberger who gave treatment to Raja Ranjit Singh of Punjab.

But the outbreak of cholera, malaria, smallpox and failure of traditional medicine in curing them changed the scenario. Western medicine was applied and their introduction was accelerated by the Charter Act of 1813 and 1833. The measures taken by the Britishers were a tremendous blow to the legacy of traditional medicine. But they could not ignore the merits of indigenous medical plants. So, poor scholars and kavirajas were appointed to procure the plants for British pharmacopoeia. These were sold to Indian market at a very high rate. The burning of ancient books on Ayurveda in Kerala was done by Europeans so as to
impose European system of medicine on the natives. European invasions and the subsequent British rule brought in many changes in India. Western life style was gradually accepted. European sanitation and medicine systems replaced the indigenous methods of public health care. In British India, the colonial mode of health care was characterized by residential segregation and neglect of indigenous population. With the consolidation of British and achievement of western medicine, traditional medicine was dismissed as a folk lore. Western medicine was only taught in medical colleges and practiced in government hospitals and dispensaries.

**British Health Policy**

The health policy of the British aimed at catering to the needs of the British officers and the soldiers. It failed to make the transition from state medicine to public health. Lord William Bentinck formulated a comprehensive plan for the spread of vaccination under Dr. Mackenzie. In Madras, an isolated hospital was built to contain the spread of small pox, outside the bound of Black Town. *Vaccine virus* was first brought to India in 1802 and introduced in the Madras Presidency by exertions of Dr. John Anderson. Efforts were taken to induce people to accept vaccination. Pamphlets explaining Jenner’s discovery were circulated in all areas. Indigenous medical practitioners were given training in vaccination.

From 1859 to 1914 the English were unable to exert influence over sanitary policy. Lord Mayo’s resolution on decentralization and local self government accelerated by Lord Ripon reforms placed the financial and administrative responsibility for public health with provincial governments and municipalities. In and around the cantonments, they warded off cholera and with the help of quinine they managed to cure malaria. Warehouse and factories were built in trade centres where surgeon and surgeon mates provided allopathic relief. However medical relief
was insufficient. From the headquarters of London huge chest of medicine and surgical ware were sent to trading ports called chest of drugs. Three classes of doctors were organized to combat the health problem.

There were well-qualified medical men, apothecaries (surgical, medical and midwifery) and surgeon mates. Most research work on history of public health in India referred to the fact that Government measures to combat epidemic disease were not adequate. The anti-plague measures, though a benign health policy of the British, proved an utter failure. V.R.Muraleedharan in his study on Madras had referred to the lukewarm response of the Government in fighting against malaria. Malaria was severe in places were less anti-malarial operations were taken. In 1885 Lady Dufferin organised the National Association for supplying medical aid by women to women in India through Dufferin Fund. In 1900 Lady Curzon established Victoria Memorial Scholarship for curing childbirth complications. A sound foundation for the growth of medical science in India was laid.

In the context of widespread health problems in India, the history of medicine and its social relations is instructive. Most of the epidemics spread from parts of cities inhabited by sailors, soldiers and merchants. In the absence of voluntary organization, attempts for preventive and curative steps were taken by the government. The social and environmental dislocation along with a weakening public health care system had led to resurgence of communicable diseases.

With no serious agenda, programme or the attempt to eliminate the disease people suffered from cholera, smallpox, malaria, plague, tuberculosis and leprosy. It took long time for the people to understand the problem of the disease. Moreover the British rule had created many medical problems by the unregulated urbanization which produced conditions for diseases to thrive on. Devastating epidemics took
millions of lives when Indians were debarred from scientific field and there was no real progress. British soldiers were admitted to hospitals from 1859-1900 for malaria, typhoid and venereal disease.38

Sir Edward Chadwick, the apostle of efficient water supply and drainage, started in Great Britain the greatest and successful crusade for the removal of insanitary conditions responsible for the causation of sickness. He documented the status of housing, lack of sewerage and adequate supplies of water, unhygienic circumstances of places, and life expectancy of social classes and beneficial health effects of preventive measures. Considerable strides were made in regard to Environmental Sanitation. The early Indian to talk about sanitation and public health was S. Goodeve Chukerbutty, one of the four Indian medical graduates sent to England for higher education and completed Indian Medical Service.39 Colonel W.G. King had addressed in the Indian Medical Congress in 1894 that even when more money was spent on education than public health, educated Indians defecated by the side of the river or tank.40

British medical systems were colonial, and mode of health care was characterized by segregation and neglect of indigenous population. With the passage of time, the migration from rural to urban places had created a drift in the environmental health and hygiene. Vaccination provided means of surveying and understanding indigenous population and was important in the absence of birth and death.41 Prominent Indians like Surendranath Banerjee who advocated the sanitary reforms stressed the need for public health to progress along with the education of the people.42

During 1806-09 heavy and frequent showers poured out making the rain water remain stagnant in the streets.43 These places became the breeding ground for mosquitoes. Epidemics and famines had frequently visited the state during the
administration of the English East India Company. Insufficient rainfall and failure of successive monsoons were mainly the cause of famines. The frequent occurrence of famines was attributed to the evils of alien administration. \(^4^4\) Slackness in importing grains and failure to check mortality showed that relief measures were not formulated at the right time.

Nineteenth century is called as the century of worst natural calamities. Between 1783 and 1854 there were six famines in the Presidency. The worst one terrible in magnitude, intensity and duration was severe in North Arcot and Salem which had tremendous social and economic consequences. Since the famine of 1878 many new wells were excavated for irrigational purpose.\(^4^5\)

In the early nineteenth century, some of the relief measures were undertaken by the British administrators. The revenue regulations by Sir Thomas Munro had a profound impact on the economy of the land. The heavy burden of land revenue accentuated the sufferings due to famines and epidemics. In the field of agriculture, frequent failure of the monsoons resulted in famines and plague.\(^4^6\) Sir Arthur Cotton, British Engineer was imperishably connected with first canal works in the south conceived the idea of construction of Coleroon, Godavari, Krishna and Pennar dams and these were the major irrigation works undertaken before 1858. Famine conditions prevailed in large areas during 1942-43 in Madras which was dealt with promptly by which sixteen million workers were paid wages in grain.\(^4^7\)

Due to insanitary condition water and air became polluted and dampened. In the temple festival at Palani, the pilgrims became victim to dreadful fever. The death toll mounted and in the villages of Madurai district there was depopulation. People had migrated to places like Tanjore. Disease like epidemic fever and cholera were common. But the British Government was reluctant to assume any responsibility for the benefit of the people. Due to low vitality of population, severe epidemics of
cholera and plague had entered in the state. The economic condition of the people differed from place to place. Cholera, smallpox and chickenpox swept villages and to save themselves people began to migrate.\textsuperscript{48}

In modern life in the wake of transition from rural to urban economy, disease spread through myriad source of infection. Places affected by smallpox were left unprotected and sanitary principles of cholera proved to be inadequate.

**Medical Practices in Tamilnadu**

Numerous references bear witness to the indigenous system of medicine prevalent from early times in Tamilnadu. Tamil works speak of three different medicines. The ancient practices of medical treatment varied from place to place. Herbs and medicines used by primitive people were similar to that of Siddha system of medicine. Magic and superstition were associated with herbs and home remedies during the early stages of man in Tamilnadu.\textsuperscript{49} The medical system practiced in Tamilnadu earlier was Siddha attributed by tradition to Saint Agasthya and dates back to the early Sangam age. Ayurveda was first mentioned in Silappadikaram. The Tamil concept of healing versus cooling food reflects basic ideas of Ayurveda.\textsuperscript{50}

*Thiruvalluvar* propounded his medical philosophy based on naturopathy. Proper regulation of diet seemed to be the fundamental principle of health. People suffered from many diseases owing to malnutrition, unbalanced diet and excessive eating.\textsuperscript{51} In the Sangam poems of the post Sangam age there is a reference to the usage of the medicinal plants. Women priests in Tamilnadu diagnosed diseases and demons that caused diseases.\textsuperscript{52}

Tamils knew medicinal practice and theory from the very early times. Tamilian knowledge of herbs and seeds and their curative properties included pepper, dried ginger, long pepper, solanum indicum, cardamom, wild jasmine, Arabian
jasmine, trumpet flowers and many roots and herbs enhanced the native medical system. Role of dietics, duties of physicians in healing diseases and four main divisions of medicine project the health and healthy methods of Tamils. Madurakavi of the seventh century belonged to the family of native physicians. Medicine practiced by physicians in the pre-modern Tamilnadu was based on the idea that all physical ailments could be traced to one or other of three humours, namely, wind, bile and phlegm. Pulse reading showed the extent of the disease. Medical treatment in Tamilnadu started in the second century and developed in the twelfth century A.D. Season-oriented treatment was given in the temples.

During the early medieval period Senkalnimur and Thulasi were the names of the medicinal plants referred to in inscriptions. The Varma art which propagated in China to cure paralysis had rooted in Tamilnadu, thanks to the efforts of Pallava Dharmabodhi. Even now it is specifically practiced in Kanyakumari. During the Maratha rule, Raja Serfoji devoted himself for the progress of research in the Dhanvantri Mahal situated at Thanjavur by bringing together the Siddha, Ayurveda and Unani physicians. Attavanais or lists or recipes were recorded in palm leaves called Anubhava Vaidya Bagam. Even today in South these prescriptions are widely used as Hindu medical system. There were doctors for the treatment of horses, camel, dogs and cats and thus veterinary medicine progressed.

Siddha specially developed to suit the climate, physical and social condition of Tamilnadu and the Siddhars learnt the art of healing inheriting from their forefathers. Siddhars who lived in Kanjamalai (Salem district) had special powers to convert base metal into gold. The South Indian Siddha Vaidya Sangam established in Chennai by S.S.Anandham in 1915 gave a fillip to open the School of Indian Medicine during the ministry of Raja of Panagal for the propagation of Indian system of medicine. Unani came from Middle East to Tamilnadu. The Indian systems of medicine were in wide practice in the state for a long time, though without recognition or encouragement.
School of Indian Medicine

The Indian Medical School established by the Indian Government was opened by the then Governor of Madras, H.E. Lord Goshan. The Usman Sahib Bahadur Committee Report of 1921 recommended schools and colleges of Indian medicine and thus in 1925 the School of Indian Medicine was opened. The revival of the siddha system was done by the Raja of Panagal under the Justice Party regime. For the encouragement of recognition of Indian system of medicine, medical relief in rural areas of the Madras Presidency was recommended. Efforts were made to blend Siddha with allopathic and partial success was achieved as medical practitioners tendency was to learn allopathy. The Indian Medical Practitioners Cooperative Pharmacy which existed since 1944 manufactured Ayurvedic, Siddha and Unani medicines.

In 1946 the Congress Ministry took over the administration of the Presidency and there was possibility for the reorganization of the Department of Indian Medicine by the joint efforts of Premier T.Prakasam and the Public Health Minister Mrs.R.Lakshmipathi. The School of Indian Medicine was converted into College of Indian Medicine by the Government in 1947 and the Diploma course of Graduate of College of Indian Medicine was instituted. Epoch making development and discoveries like anatomy, chemotherapy, germ theory, vaccination and penicillin tended to overtake the traditional medicine.

Medical Personnel

The medical men were community doctors and leaders of the tribe and were respected by the community both for spiritual and material welfare of the people. The Brahmins had doctors well acquainted with medicine other than astrology and mathematics. The ‘Vaidyas’, the native doctor in Tamilnadu who belonged to barber community, were the medical men and their women folk were the midwives and both
of them knew the traditional way of medical assistance. Women midwives were praiseworthy as they were trained to meet medical problems of native women. During the Chola period the medical practitioners lived in Brahmadeya land and these doctors or *Vaidyakani* attended to the medical needs of the people. The medical man was called *vaidhyar* or general physician, *maruthuvachi* or lady physician, *thathi* or lady nurse. The talents of the medical scholars were appreciated and they were absorbed as members of councils in royal courts. *Maruthuva Damodaranar* was a member of the third Tamil Sangam.

In the medieval period medical services were regarded as charitable and medical practitioners did not charge any fee. The Great Mutiny of 1857 was an eye-opener which indicated inadequacy of trained medical personnel. Till 1924 village people had no access to qualified doctors and contented with services of unqualified men. Lord Napier, the Governor of Madras devised a scheme to train village doctors, to provide medical aid to the rural population of Madras. The Government recognized the problem in qualified medical aid for the rural population and measures were taken. Rural dispensaries were opened to encourage medical men to settle down in rural areas and offer medical relief to the rural masses. Medical relief in rural areas was not satisfactory due to finance and paucity of qualified medical personnel. *Village vaidyas* were trained to administer medical relief. The Government did not maintain rural dispensary and it was maintained by local boards and Government paid subsidies to dispensaries.

Besides general practitioners, there were specialists for fractures, snake bites and optical and nasal diseases and rejuvenation. By 1925 40% of the practitioners in the Presidency were employed as civil assistants or sub-assistant *surgeons* in the Medical Department. They were not eligible to get benefits of the Government service. The subsidized rural practitioners were considered as pucca independent
practitioners. The Government also decided to stop appointing midwives in the rural dispensaries. The unhealthy and employment competition which existed among medical practitioners in Madras led to the influx of foreign immigration of practitioners. To study and utilize the services of learned vaidyas and hakims in rural and urban areas the Chopra Committee was appointed in 1946. The Government gave approval for the appointment of village vaidyas or hakims.

Medical Institutions in Tamilnadu

Health care delivery system forms the basis of rural health care and the medical institutions provided health assistance to the people. In the Sangam Age healing centres in Puhar city was called Chakkaravallakkottam, inhabited by hermits who redressed the sufferings of the people. Public places or aravi functioned as charity for village people to cure severe ailments. Buddhist monks or Therars spread the gospel of Buddha in Tamilnadu by establishing monastries. They learned and practised medicine. When the Jains entered into Tamilnadu they gave medical aid in the monastries. In the medieval period temples provided treatment through dispensaries and hospitals which were attached to them. Arogya Salai was a term of Sanskrit origin which meant hospital as referred to in Srirangam inscriptions.

Hospitals in South India were established during the Chera, Chola and Pandya rule. Chola monarchs like Sundarachola established free dispensary called Athulasalai for the benefit of the poor in various parts of the empire. About twenty types of medicines were stored in different hospitals, with nurses to attend and administer medicines and barbers were to perform minor operation. The earliest mention of an emergency hospital for sick soldiers was at Fort Saint George, Madras with a doctor. Many more hospitals sprang up at different military stations in the eighteenth century. During the Anglo-French struggle for supremacy some of them were destroyed and shifted. Old hospitals were restored and constructed and the biggest among them was
the Madras General Hospital in 1772. The idea of a hospital for natives of Madras was first mooted by Surgeon William Garden in 1787. Lunatic asylums were constructed at Madras in 1794. By 1842 there were six civil hospitals.

Hospitals received a fresh impetus by the outcome of graduates and doctors from Madras medical schools and colleges. The Victoria hospital or Ghosha hospital was established with an all women staff under the care of Mary Scharlieb of Madras Medical College. Earlier the British medical officers were not willing to educate women to be doctors. The credit of having women and children hospital at Egmore in 1844 should go to the East India Company. The building for institutionalized medical treatment for the benefit of European soldiers in the form of Sanatorium was first attempted by John Sullivan at Nilgiris. In each district by 1921 there were twenty medical institutions established which served 75000 people. The Government realized that facilities in rural areas were inadequate.

From 1922-23 district health problems were left to the supervision of the district medical officers. The District boards and municipalities had their own staff of rural sanitary inspectors and health officers. They were vaccinators who were supervised by deputy inspectors of vaccination. As the public health administration in the district was not satisfactory, public health services were expanded in the provinces and districts. A comprehensive sanitary policy to encourage public health research and training was formulated. District health committees were set up and health officers were employed in the sanatorium. District health officers were ordered to be appointed from 1923. Thus the district health scheme was introduced in Madras Province.

For the first time a scheme designed to deliver health care to rural people was introduced in 1924. Fifty seven lakhs of rupees were spent on hospitals and dispensaries. In order to attract the private practitioners crowded in urban areas to
rural areas the scheme called the rural medical relief scheme was started. About 229 dispensaries in villages were sanctioned in 1924 and due to shortage of medical practitioners only 159 dispensaries were opened.

Prohibition of opening new subsidized dispensaries by 1930 led to curtail the growth in the number of medical institution in the Presidency. In 1932 there were 1086 medical institution in rural areas and in 1938 only 1050 functioned. This fall in the number was due to the changes in the political scenario. The Indian National Congress decided to provide a scheme called the Honorary medical scheme. Under this scheme honoraries were employed in Government medical institution which showed a thirty percent increase in the numbers from 389 to 500.

**State Health Administration**

The first milestone in the state health administration was the year 1919 when the states obtained autonomy from Central Government in public health matters. As a result, public health organization was created in all states. Medical administration including hospital, dispensary and asylums and provision for medical education, public health and sanitation and vital statistics were transferred to the provinces. In order to provide medical and public health assistance to the people the Board of Public Health was created in Madras in 1920. The year 1922 was significant in the history of public health as eight cholera parties were maintained to control cholera epidemics in rural areas. These parties acted only after the information of epidemic conditions by the officers in charge of statistical department. Due to this delay cholera parties attended their duty only after the spread of the epidemics. Only preventive work was done and hence the cholera parties were abolished in 1923.

In 1923 the League of Nations established health organization and arrangements were made for preventing disease on worldwide scale. There were six new sanctions for Assistant Director for Public Health with specific allotment of work
for each Director. These trained people supervised vital statistics, vaccination and smallpox, epidemics, fairs and festivals along with northern, central and southern provincial parties. This arrangement proved successful.  

Public Health Ministry functioned only after 1920 and after 1937 it passed into the hands of the Indians. The responsibility to tackle the epidemic and funding of rural health was given to the District and Union Boards. These boards were not able to cope with the situation due to scarcity of health personnel. Municipalities and local boards were unable to raise sufficient revenue for vital sanitary reforms. All states were given autonomy over health subjects and were divided into three lists by the Government of India Act 1935. Between Government of India Act 1919 and Act of 1935 certain development took place in the Madras Presidency. It was the passing of the government orders for public health department to improve the working conditions by allotting duties. By 1923 there were 25 District Health Officers in charge of the rural areas of the districts in the Presidency excluding agency parts. Health care planning was carried out in 1937 and the Government appointed a Health Survey and Development Committee to enquire into the health conditions in the country to improve medical relief to the people.

The Department of Health came into existence in 1945 by separating it from the Department of Education and then onwards health became a separate portfolio under a minister. Before 15th August 1947, the Director General, Indian Medical Services was the principal medical advisor to Government of India and the Public Health Commissioner was the advisor on Public Health. The function of the Department of sanitary and vaccination were preventive whereas the medical department was curative. The sanitary commissioner with two or three deputy sanitary commissioners supervised and guarded the public health activities of the Madras province.
To reorganize the medical department, the Congress ministry formulated a scheme known as the Honorary Medical Scheme. The Government planned to lessen the possibility of expansion of Medical department following the recommendations of the Retrenchment Committee of 1931-32. Later the Indian Medical Department was re-designated as Director of Medical Services for Madras state. With regard to medical relief, the department was responsible for the maintenance of important hospitals in the Madras city and at the headquarters of districts and taluks in special tracts.

Health Legislation

The city of Madras had a separate act of 1884 which made vaccination compulsory and it also contained provisions for improvement of general sanitation. Under the Epidemic Diseases Act 1899 measures of quarantine were undertaken. People were forcibly removed to hospitals. The Madras Registration Act 1914 aimed at training of medical practitioners who should possess degree from a recognized University prescribed in the Act. It judged the standard of instruction at universities and medical colleges in the state. The Madras City Municipal Act of 1919 defined infectious disease as one which is caused by microorganism and transmitted from sick to healthy people. Notable diseases were plague, cholera, smallpox, tuberculosis, diphtheria, enteric fever or typhoid fever, measles, leprosy and virus encephalitis. Leprosy was excluded later.

The important milestone in the health legislation was Madras Nurses and Midwives Act passed in 1926. Maternal services were provided by midwives and the responsibility of checking up of maternal mortality remained in their hands. The midwives were devoid of training and hence clean midwifery was not to be seen. The system of training of the midwives was laid down in the order of government maternity hospital, Madras. Under the above act qualification and registration of all
nurses, midwives, health visitors, auxiliary nurses were required. The registration of midwives and nurses was made compulsory in urban areas. Trained nurses and midwives were to look after the deliveries in the hospital. But in the rural areas Thayis or elderly women looked after delivery which increased risk of maternal mortality. The midwives were allocated with duties to attend expectant mothers at birth and visiting them at regular intervals. Midwives educated mothers in infant care and brought to light unregistered births and unvaccinated children. They referred the complicated cases to hospitals. From 1927 abortion cases were also treated. Their services to mothers and steps to educate them on child care had direct bearing on infant mortality. Each cluster of villages had one trained nurse and two or three midwives appointed by the State Government.86

There was intense legislative activity during 1919 and 1920. But there was a need for a compact and separate Act for the whole province for advancement of public health. The long felt need was met by the Madras Public Health Act of 1939. The ceaseless efforts and perpetual persuasion of Dr.Muthulakshmi Reddi, the veteran champion of abolition of devadasi system led to the enactment of Madras Public Health Act.

Public Health Act 1939

The only composite Public Health Act passed in 1939 with the provision of research and containment of diseases was the Madras Public Health Act drafted on the basis of Madras city Municipal Act 1919, Madras District Municipal Act 1920 and Madras Local Board Act 1920. Various schemes, relating to training of public personnel, establishment of Bureau of Malaria, expansion of public health services, industrial hygiene, nutritional research, conservancy and sanitation, public health propaganda and publicity were mentioned in this act. Supply of protected water in villages, expansion of protected water supply and drainage, medical relief in villages.
taluk and district hospitals, improvement of TB sanatorium, development of Kings Institute, Guindy, town planning and elimination of slums were other measures adopted. Steps were taken for the training of health visitors, midwives and dais. Training of rural medical practitioners in public health work and establishment of health units were adopted by this act. A major part of the act was related to infectious diseases.

Being one of the significant states in South India, Madras State had its identity based on culture, climatic condition and the nature of the soil created situation for the spread of diseases. The demographic study reveals the fact that most of the districts have higher birth rate in urban than rural areas. Regarding density of population Madurai experienced maximum density proportion of females and literacy. The high migration due to return of Tamil settlers in Burma, Malaya and Ceylon following World War showed increase in the total population. In the historical point of view, Madras state had many experiences of changing political scenario and social behaviour of the people differed. The following chapter would provide a brief description on the socio and economic consequences of health and disease in Tamilnadu for the period of twenty years.
Death Rate in Tamil Nadu between 1947-1967

Birth Rate in Tamil Nadu 1947-67
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