Chapter-III

THE MEDICAL ASPECTS IN INDIA AND THE GROWTH OF HEALING MINISTRY

The medical systems that are truly Indian in origin and development are the Ayurveda and Siddha systems.\(^1\) Ayurveda is practiced throughout India but the Siddha system is practiced in Tamilnadu\(^2\) and its adjoining areas in South India. These systems differ very little in theory and practice. The origin of Ayurveda is traced back to Vedic times and attributed to mythological figures sages and seers. In ancient India, the celebrated authors in Ayurvedic medicine were Atreya, Cheraka, Susrutha and Veghabhata.\(^3\) The ‘Susruta Samhita’ though mainly devoted to surgery, it also includes medicine, pathology, anatomy, midwifery, ophthalmology etc. It is also believed that the early Indians set fractures, performed amputations, excised tumours, repaired hernias, excelled in cataracts etc.\(^4\)

Ayurveda believes in ‘tridorha theory of diseases’ such as Vata (wind), Pitta (gall) and Kapha (mucus). Disease was explained as a disturbance in the equilibrium of the three humors; when there were in perfect balance and harmony, a person is said to be healthy.\(^5\)

Three important drug substances are used in Ayurvedic medicine are vegetable products such as leaves, roots, flowers, bark considered to have medicinal value, various kinds of agricultural and dairy products such as oils, ginger, sugar, areco nut, palm leaves

---

\(^1\) Jaggi, O.P. Indian System of Medicine, Atma Ram and Sons, Delhi, 1973, p. 6.
\(^2\) Ibid., p. 15.
\(^3\) Ibid., pp. 16-20.
and animal substances like bones, urine, hair marrow, semen, horns, nails, hoops etc., and mineral products like gold, silver, copper dust, iron dust, mercury, lead, mercury etc. The mineral drugs are placed in high esteem because they would not perish or spoil so easily and quickly as those of herbal drugs or animal products. Generally the country physicians collected the drug substances from surrounding places. These substances are powdered and if necessary prepared as liquids and used. At some places, the temple physicians cultivated some of the herbal substances in the temple gardens.

The Reddi and the Vijayanagara kings of Andhra Desa patronised many medical scholars and encouraged them to compose works on the sciences of Ayurveda. Hence, they took up research and invented many new things. Previously diagnosis was made on the basis of the five particulars relating to the inducing causes (nidāna), premonitory indications (puvarupa), symptoms (rūpa), applicability of medicine, diet, course of conduct (upāśaya), and the beginning of the disease (samprāpti). Around A.D. 1300, the method of astasthāna parikṣa in diagnosis was introduced by the Andhra scholars. It marked a mile stone in the history of indigenous medicine in India. With this achievement, revolutionary changes started taking place in the development of the medical science.

The study of the method of teaching Ayurveda, the qualifications required for the pupils and preceptors, the relationship between the student and the teacher maintained, the ethics followed in the profession, the status of a physician in the society, etc., helped the clear understanding of the factors contributed for the development of the science.

---

6 Jaggi, O.P. History of Science and Technology in India, Vol. 3-7, Atmaram and Sons, Delhi, 1979, p. 84.
8 Ibid., pp. 48-53.
The instruction in this science and the selection of students was limited usually to the higher caste people such as Brahmins and Vaisyas only. The Saivites and the Vaisnavites vied with each other to educate the masses irrespective of their caste or creed. The free services made by the parahitas in the therapeutic as well as educational fields in the medical and veterinary sciences came into light.

The drug substances were collected from the Indra-Kiladri, Srisailam, Nuzividu, Kondapalli, Kondavidu, Tirupathi, etc. Some of them were exported to foreign countries such as China, Russia, Brazil, Ceylon, Hotland, etc., by the Andhra and the Portuguese merchants. As a result of this flourishing trade, the indigenous medicinal goods were introduced in the foreign countries and some drug-substance from other countries were added to the indigenous materia medica. The physicians of Andhradesa keenly observed and found out their rasa, virya, guna, vipaka and prabhava of those substances and explained them in their medical work.10

The indigenous drugs were significant in the aetiological and economic point of view. They were found available very easily and at very cheap cost to the physicians as well as the common people. Generally, the physicians collected them from the temple-gardens or the backyard of their homes or in the surroundings of their village. That’s why people did not suffer due to lack of purchasing capacity or due to the scarcity of the things. The Andhra medical scholars tried their best to propagate the knowledge about the materia medica among the common people through nursery rhymes and folk-songs. They translated many medical lexicons from Sanskrit into Telugu and propagated them

---

10 Om Prakash, The Dutch Factories in India (1617-1623), Delhi, 1984, pp. 228-231.
with their names in usage. The kings and the feudal lords also maintained gardens in the towns and villages and appointed Vanapalas (Gardeners) for their supervision. Garden lands were donated to the temples\(^\text{11}\) for the cultivation of the herbs. It facilitated the maintenance of the profession and the preparation of drugs.

Not only the herbal drugs but also the mineral and *rasa* medicines were in great demand in those days. The physicians of Andhradesa were proficient in preparing them. They invented many mineral and *rasa* medicines and the invention of a new method i.e., the calcination of mercury added credit to the Andhra scholars.\(^\text{12}\) The invention of a new drugs such as *Purnacandrodaya* and *Makaradhwaja* was the result of the research made by the Andhra scholars. They prepared the *araqs* borrowing the pharmacological method from the Unani system and administered them in their practice. Though they took the pharmaceutiological method from the Unani system, they made use of the same compounds of the indigenous drugs as prescribed by the previous scholars. the pharmaceutical methods of the indigenous physicians were appreciated by the foreigners also.

In every branch of Ayurveda, we find development in therapeutics. In Ophthalmology, a significant development can be found both in diagnostic and therapeutic methods. Glasses were prescribed in case of eye-sight defects. Cataract operations were very much common.\(^\text{13}\) Dental surgery also was developed. Fixing caps on the broken teeth was another contribution of these physicians.

---


\(^{12}\) Hymavathi, *op. cit.*, pp. 205-208.

The surgery continued as an important branch in the indigenous medicine during this period. Attending the wars and getting wounded was a common thing in those days. The physicians who were experts in the salya and sālakaṭya tantras accompanied the troops and treated them in the war camps. “Since olden days, the Indian doctors were renowned for their surgical operations.” In plastic surgery, they had achieved much perfection that the European surgery of the nineteenth century had to borrow some methods from them. Since the chopping of noses and cutting of ears continued to be the punishments in criminal Procedure code, the art of plastic surgery continued to be a flourishing branch during this period. Some mathas appointed surgeons in their hospitals. The Jain scholars also took up surgical operations to alleviate the patient from pain or disease. Even the nurses were well acquainted with the most difficult operations in case of abnormal delivery. After the first half of the seventeenth century, even surgery fell into decay. The unfortunate atmosphere prevailed then, discouraged to take up complicated operations resulting in the gradual fall of complex surgical methods into decay. The simple operations in case on piles, cataract, etc., continued as usual.

Two types of physicians are known from the records i.e., royal physicians and native physicians. The royal physicians are more educated and mostly used in herams and palaces and were having medical training in various fields of Medicine. However, the native physicians are used for native people whose medical training is usually a hereditary affair, led for raise of untrained physicians from the Sudra and Panchama castes in the later half of medieval period and Modern period which led for dangerous

15 Hymavathi, op. cit., p. 179.
effects on *materia medica* of India including Andhra Desa and led for raise of quark doctors in large numbers whose medical knowledge is abruptly nothing except the fact that they can impress the patients with soothing words.\(^1\)

It is a common practice among the families, the simple home remedies were prepared by the people especially housewives themselves and other compound drugs were prepared by the expert physicians utilising the services of their assistants. In this process, many instruments were used. The common drugs that are prepared by the trained Ayurvedic and Siddha physicians include Churman (powder), Kashayas (decoctions), Svarsas, Asavas (liquids), Gulikas (pills), Tailas (Medical oils), Dravakas (distilled mineral oils), Anjanas (ointments), Bhasmas (Ashes). These medicines were prepared with high proficiency to suit the ailment of a patient.\(^2\)

The physicians of medieval Andhradesa stressed much on the *swasthavrtta* to avoid disease and propagated the importance of the upkeep of health and personal hygiene. They wrote works on *dinacarya* and *rtucarya* and on dietetics. Almost all the medical works contained chapters on these topics. They explained the preparation of many tasty recipes conducive to good health and also of many cosmetics and other things for the upkeep of beauty and charm. Thus cookery and cosmeticology also prospered as allied subjects in medicine.\(^3\)

In case of epidemic disease, it is to be observed that the people worshipped village deities for averting their wrath. Though some of the methods followed in the

---

\(^1\) Hymavathi, *op. cit.*, pp. 161-166.
\(^2\) Ibid., p. 296.
\(^3\) Ibid., p. 136.
worship animal sacrifices, include dhupas etc. Though the people observed some traditional propitiatory rites, they definitely followed prescriptions of the physicians such as dhupas, decoctions, medicinal stones etc., and the dietetic regulations. The prevalence of the cult of worshipping deities such as Poleramma, Anakalamma etc., by the common people indicate the immense faith of the people in that cult. It reveals the fact that it was capable of giving psychological relief and courage to them to face the epidemics.19

In this connection, it may be observed that it is also an age of confusion and ignorance in the context of the common man’s life in the villages. There were several causes for this contradiction. Especially, it was a period which witnessed a wide gulf between the intellectual high caste and the illiterate low caste people. Many irrational practices had developed in the field of medicine due to lack of proper understanding of the customs and traditions. It was at this time that some scholars and saints started remonstration against evil practices in this field. Among them mention may be made of Vemana who travelled throughout Andhradesa and observed the social customs and traditions of the people. He warned the people that this kind of trend in the field of medicine was very harmful and advocated that the diagnosis and the treatment should be done in a scientific way. He opposed the miraculous powers attributed to the mineral drugs and rasausadhas.20 He also preached that those powers were impossible to be achieved and should be regarded as mere superstitions which would cause harm to the science of medicine and to the society.

19 White Head, op. cit., p.
20 Hymavathi, op. cit., p. 201.
On the whole, it can be seen during medieval period a definite development in the diagnostic, pharmaceutical and therapeutic methods in the science of indigenous medicine. The direct and the indirect patronage by the kings, the reform movement which took place in the medical field during this period, the speedy spread of knowledge pertaining to the drugs, the adaptable nature of the physicians according to the foreign influences reveal the healthy atmosphere that prevailed for the development of the science. The liquidation of the patrons of the practitioners at the local level, the new developments in the western medicine, especially in the surgical and the pharmaceutical methods, the mispropagation by the Europeans against the indigenous medical system from the closing period of seventeenth century led to the stagnation of the indigenous medicine in Andhradesa from the eighteenth century onwards, though it did not lose its popularity completely in the society.

MEDIEVAL PERIOD

The period between 1000 to 1600 A.D. is generally known as middle ages. The fall of Hindu kingdoms and the rise of Muslim rule marked important aspect of the period. Besides the Ayurvedica and Siddha medicines other indigenous systems of medicine namely Unani-Tibb and Homoeopathy, which are not of Indian origin. The Unani-Tibb system of medicine, whose origin is traced to the ancient Greek medicine was introduced into India by the Muslim rulers about the 6th century A.D. By the 13th century, the Unani system of medicine was firmly entrenched by muslim rulers in certain towns and cities notably Delhi, Aligarh, Lucknow and Hyderabad. It enjoyed State

support under successive Muslim rulers in India, till the advent of the British in the 18th century.

With the fall of the Hindu rulers the medical schools established in Hindu times also disappeared. India was ravaged by disease and pestilence: plague, smallpox, leprosy and tuberculosis. The practice of medicine reverted back to primitive medicine dominated by superstition and dogma. Rejection of the body and glorification of the spirit became the accepted pattern of behaviour. It was regarded as immoral to see one's body consequently, people, seldom bathed. Dissection of the human body was prohibited. Consequently there was no progress of medicine during this period.

When Europe was passing through the Dark Ages, the Arabs stole march over the rest of the civilization. They translated the Graeco-Roman medical literature into Arabic and helped preserve the ancient knowledge. Borrowing largely from the Greeks and Romans, they developed their own system of medicine known as the Unani system of medicine. They founded schools of medicine and hospitals in different Muslim capitals. The Arab scientists were responsible for elevating Islamic medicine to its zenith in the middle ages. The greatest contribution of Arabs, in general, was in the field of pharmacology. Seeking the "elixir of life", they developed pharmaceutical chemistry, introducing a large number of drugs, herbal and chemical. Pioneers in pharmacology, they invented the art of writing prescriptions, an art inherited by modern pharmacists. They introduced a wide range of syrups, oils, poultices, plasters, pills, powders,

---

23 Ibid., pp. 171-173.
24 Kutumbaiah, P, op. cit., p. 43.
alcoholates and aromatic waters.\textsuperscript{25} The words drug, alcohol, syrup and sugar are all Arabian. The golden age of Arabic medicine was between 800-1600 A.D.

During the turbulent middle ages, Christianity exerted a wholesome influence. The spread of Christianity led to the establishment of hospitals. Early medieval hospitals rarely specialized in treatment of the sick. Usually the sick were received for the purpose for supplying their bodily wants and catering to their spiritual needs.\textsuperscript{26} During the middle ages, religious institutions known as “monasteries” headed by monks, saints and abbotts also came up. These monasteries admitted men and women from all ranks including kings and queens. They not only helped preserve the ancient knowledge but also rendered active medical and nursing care to the sick.

MODERN PERIOD

The period following 1500 A.D. was marked by revolutionary changes including industrial and medical fields. The industrial revolution in the West brought great benefits leading to an improvement in the standard of living among people. With advancing degrees of civilization, modern medicine much different from earlier types also evolved.\textsuperscript{27}

The 17\textsuperscript{th} and 18\textsuperscript{th} centuries witnessed substantial discoveries in the field of medicine such as Harvey’s discovery of the circulation of blood (1628) Leeuwenhoek’s microscope (1670) and Jenner’s vaccination against smallpox (1796). However, the progress in medicine as well as surgery, during the 19\textsuperscript{th} century would not have been

\textsuperscript{25} Hymavathi, \textit{op. cit.}, p. 355.
\textsuperscript{26} Jaggi, O.P. \textit{op. cit.}, pp. 53-56.
\textsuperscript{27} Park, J.E. and K. Park, Parks Text Book of Preventive and Curative Medicine, Banaras Das Bhanot, Jabalpur, 1991, p. 4.
possible but focal Morgagni (1682-1771) who founded a new branch of medical science, pathologic anatomy.\textsuperscript{28}

The dichotomy of modern medicine is basically based on two branches of study namely curative medicine, and public health/preventive medicine. It is evident at the close of the 18\textsuperscript{th} century. These studies acquired more importance on account of various aspects on account of industrialisation and growth of population. After 1900, medicine moved faster towards specialization, and a rational, scientific approach to disease. The pattern of disease began to change. With the control of acute infectious diseases, the so-called modern diseases such as cancer, diabetes, cardiovascular disease, mental illness and accidents came into prominence and have become the leading causes of death in industrialized countries.\textsuperscript{29} These diseases could not be explained on the basis of the germ theory of disease, nor treated with “magic bullets”. the realization began to dawn that there are other factors or causes in the aetiology of disease, namely social, economic, genetic, environmental and psychological factors which are equally important. Most of the these factors are linked to man’s life style and behaviour. The germ theory of disease gave place to a newer concept of disease — “multifactorial causation”. The concept of multifactorial causation was revived by epidemiologists who have contributed significantly to our present-day understanding of multifactorial causation of diseases and “risk factors” in the aetiology of disease.\textsuperscript{30} The developments in modern medicine may be reviewed broadly under two heads, curative medicine and preventive medicines.

\textsuperscript{28} Ibid., p. 4.  
\textsuperscript{29} Noble, John. Primary Care and the Practice of Medicine, Little Brown & Co., Boston, 1976, p. 29.  
\textsuperscript{30} Ibid., p. 48.
The primary objective of curative medicine is the removal of disease from the patient (rather than from the mass). It employs various modalities to accomplish this objective, such as diagnostic techniques, treatment etc. In the middle of the 20th century a profound revolution was brought in “allopathic medicine” which has been defined as “treatment of disease by the use of a drug which produces a reaction that itself neutralises the disease”,31 by the introduction of antibacterial and antibiotic agents. This has led for the use of specialities based on clearly defined skills such as surgery, radiology, and anaesthesia; some based on parts of the body such as ENT, ophthalmology, cardiology, gynaecology, and some based on particular age or sex groups such as paediatrics, geriatrics and obstetrics. Again, within each speciality, there has been a growth of sub-specialities, such as, neonatology, perinatology, paediatric cardiology, paediatric neurology and paediatric surgery.32

Specialization has no doubt raised the standards of medical care, but it has escalated the cost of medical care and placed specialist medical care beyond the means of an average citizen, without outside aid or charity. It has infringed upon the basic tenets of socialism and paved the way to varying degrees of social control over medicine. Specialization has also contributed to the decline of general practice and the isolation of medical practitioners at the periphery of the medical care system.33

33 Noble, John, op. cit., p. 89.
Preventive Medicine

Preventive medicine developed as a branch of medicine distinct from public health. By definition, preventive medicine is applied to "healthy" people, customarily by actions affecting large number or populations. Its primary objective is prevention of disease and promotion of health.\(^{34}\)

The discovery of sulpha drugs, anti-malarials, antibiotics, anti-tubercular and anti-leprosy drugs have all enriched preventive medicine. Chemoprophylaxis and mass drug treatment have become important tools of preventive medicine. The pattern of disease in the community began to change with improved control of infectious diseases through both prevention and treatment. Further, the preventive medicine has brought into focus a new concept – concept of disease eradication began to take shape. This concept found ready application in the eradication of smallpox: Eradication of certain other diseases (e.g. measles, tetanus, guinea worm and endemic goitre) are on the anvil.\(^{35}\)

Preventive medicine has become a growing point in Medicine. Advances in the field of treatment has diminished the need for preventing care nor its usefulness. Preventive measures are already being applied not only to the chronic, degenerative and hereditary diseases but also to the special problems of old age. In fact, as medical science advances, it became more and more preventive medical practice in nature. The emergence of preventive paediatrics and preventive cardiology reflect never trends in the scope of preventive medicine.\(^{36}\)


\(^{35}\) Ibid.

\(^{36}\) Ibid.
Modern medicine is no longer solely an art and science for the diagnosis and treatment of diseases. It is also the science for the prevention of disease and the promotion of health. The scope of medicine has expanded during the last few decades to include not only health problems of individuals, but those of communities as well. This is how medicine has evolved down the centuries. Medicine will continue to evolve so long as man’s quest for better health continues.

Some diseases are transmitted from person to person by direct contact. Diseases transmitted by direct contact include droplet infections, sexually transmitted diseases etc., leprosy, scabies, skin sepsis etc.

AIR-BORNE TRANSMISSION

Droplet infection

When a person with respiratory infection coughs, sneezes or even talks loudly, fine droplets of saliva containing million of bacteria and viruses are blown into the surrounding air. Diseases transmitted by droplet infection include common cold, tuberculosis, measles, whooping cough, diphtheria, cerebro-spinal meningitis, etc.\(^{37}\)

Airborne transmission includes transmission by droplet nuclei and infected dust. Diseases spread by droplet nuclei include influenza, tuberculosis, measles and several other respiratory infections. Whereas diseases transmitted by infected dust include tuberculosis, pneumonia, strepto and staphylococcal infections.

\(^{37}\) Basu, R.N. et al., The Eradication of Smallpox in India, W.H.O. India, New Delhi, p. 129.
Smallpox (Variola)

Smallpox was previously one of the greatest killer diseases in the world and endemic in around 33 countries including India.\textsuperscript{38} It is an acute, highly infectious disease caused by \textit{Variola varicella}. It is characterised by sudden onset of fever, headache and bodyache. On the third day of fever, a typical rash or eruption appears. The rash passes through the stages of macule, papule, vesicle, pustule and scab. The crusts fall off in about 3 weeks leaving behind permanent pock-marks. The eradication of smallpox in India was confirmed in April 1977 by an international commission.\textsuperscript{39}

Chickenpox (Varticella)

Chickenpox is an acute infectious disease and transmitted from person to person by droplet infection and by droplet nuclei known as \textit{Varticella zoster} (VZ) virus.\textsuperscript{40} The disease is characterised by seasonal trend in India and occurs during first six months of an year. Overcrowding favours its transmission.\textsuperscript{41} Disease is characterised by fever, malaise, aches and appearance of a vesicular rash within 24 hours. Chickenpox is quite a common disease in India especially to children. It occurs in both epidemic and endemic forms. Chickenpox is a mild, self-limited disease with mild fever and followed by eruption of rash all over the body. The mortality is less than 1\% in uncomplicated cases. Most patients are infected by "face-to-face" (personal) contact. Freshly contaminated articles used by the patient can also transmit the infection.\textsuperscript{42}

\textsuperscript{38} Park, J.E. and Park, K. \textit{op. cit.}, p. 115.
\textsuperscript{39} \textit{Ibid.}, p. 116.
\textsuperscript{40} Grant, J.P. \textit{The State of World's Children}, New York, p. 36.
\textsuperscript{41} Bark, J.E. \textit{op. cit.}, p. 117.
Measles

Measles is primarily a disease of children. It is a highly infectious disease caused by a specific of the group myxoviruses virus. It is characterised by fever, coughing, sneezing and running of the nose, followed by a typical rash. The mode of spread is from person-to-person directly through droplet infection, i.e., sneezing, talking, kissing. It is also spread by means of articles such as cups and spoons recently contaminated by the patient. The morality of measles varies greatly in different parts of the world. Recent estimates by UNICEF suggest that measles is responsible for more than 2.5 childhood deaths annually all over the globe. In India, it is a major cause of morbidity and fatality rates range from 1 to 3 per cent.

Influenza

Influenza is commonly known as “Flu”. It is an acute infection of the respiratory tract. It is caused by the influenza viruses which tends to spread very rapidly. This is one infection which is spread world-wide and causes local or widespread epidemics and pandemics. Influenza is truly an international disease and effects all ages and both sexes. In general its occurrence is limited among the adults but higher among children. In India, the epidemic mostly occur in summer and rainy season. Over crowding is the main cause for its occurrence where closed population groups live.

---

43 Grant, J.P. *op. cit.*, p. 36.
44 Ibid., p. 59.
46 Ibid., p. 124.
Diphtheria

Diphtheria is an acute infectious disease caused by the exotoxin of diphtheria bacilli (*Corynebacterium diphtheriae*). The disease attacks mainly the throat, tonsils and nose. It sometimes is absorbed into the blood and affects the nervous system and heart as well. It is particularly effects children aged 1 to 5 and occurs in all seasons although winter months favour its spread in Indian sub-continent. In developing countries like India, the disease continues to the endemic due to lack of adequate immunization.

Whooping cough (*Pertussis*)

A highly infectious disease of the respiratory tract, caused by the whooping cough bacilli (*Bordetella pertussis*). It is primarily a disease of children and occurs in epidemics every 3 to 4 years. It spreads directly by droplet infection or indirectly by articles soiled with discharges from infected cases. Whooping cough occurs in all countries as pertussis is still clinically serious illness with high mortality and often results to bronchitis and rarely subconjunctival haemorphages.

Tuberculosis

Tuberculosis is a chronic infectious disease in the world including India and caused by tubercle bacilli (*Mycobacterium tuberculosis*). The disease primarily affects lungs and causes pulmonary tuberculosis. It can also affect intestine, meninges, bones and joints, lymph glands, skin and other tissues of the body. Tuberculosis is spread

---

47 Ibid., p. 125.
mainly by droplet infection by an infectious case. Coughing generates the largest number of droplets.\textsuperscript{50}

Illness and for that matter health and socio-economic conditions go together. The socio-economic status is reflected by the level of education, per capita income, family size, birth rate, population growth rate and the cultural practices prevalent in the community. These are in fact the root causes of disease in developing countries. Unless socio-economic development takes place, the standard of living and thereby the health status cannot improve.\textsuperscript{51} Tuberculosis is a infectious disease and causing major health problem in India. It is more or less spread uniformly in urban and rural areas especially among slum dwellers and low income groups mostly between age group of 45 to 54 on account lack of proper sanitational facilities. The mortality rate in 1920 to 21 was estimated to be 400 individuals of 1,00,000 populations and the total estimates of mortality rate of pulmonary Tuberculosis of first quarter of 19\textsuperscript{th} century was 5,00,000 people.\textsuperscript{52}

SANITATION

Much of the ill-health in India is due to poor environmental conditions and sanitation, that is, unsafe water, polluted soil, unhygienic disposal of human excreta and refuse, poor housing, insects and rodents. Air pollution is also a growing concern in many cities. The high death rate, infant mortality rate, sickness rate and poor standards of health are in fact largely due to defective environmental sanitation. Improvement of environmental sanitation is therefore crucial for the prevention of disease and promotion

\textsuperscript{52} \textit{Ibid.}
of health of individuals and communities. Since more than 74 per cent of the population of India live in rural areas, the problem is one of rural sanitation. The first step in any health program is the elimination through environmental control of those factors which are harmful to health.\(^5\)

**Water**

Safe and wholesome water is a basic health need. Much of the ill-health in India and other developing countries is largely due to lack of safe drinking water. It has been estimated that more than 50 per cent of illness in India occur on account of drinking of unsafe water.\(^4\)

**Hepatitis**

Hepatitis is caused by an enterovirus. It is characterised by malaise, fever and nausea, vomiting, and jaundice. The mode of transmission is through contaminated water and food. The patient may recover completely in 3 to 6 weeks or in some cases, the patient’s condition may worsen ending in coma and death. The disease is endemic throughout the world. The water is polluted on account of several ways and the important of which are sewage, industrial waste, and Agriculture. The contaminated water enters the body through directly or through food; and other means. The water-related diseases are more in number in developing countries. The water-related diseases include:\(^5\)

(a) **Viral:** Viral hepatitis A, hepatitis E, Poliomyelitis, rotavirus diarrhoea in infants.

(b) **Bacterial:** Typhoid and paratyphoid fever, bacillary dysentery, *Esch. coli* diarrhoea, cholera.


\(^4\) Park, J.E. *op. cit.*, p. 367.

Protozoal: amoebiasis, giardiasis.

Helminthic: Roundworm, threadworm, hydatid disease etc.

Cyclops: Guineaworm, Fish tapeworm.

Poliomyelitis

In India, the above said forms of Hepatitis disease occur throughout year on account of heavy rainfall, poor sanitation and over crowding of population. It has estimated that approximately 4 million people in India suffer every year from one form or the other form.56

Poliomyelitis is a virus infection caused by an RNA viruses. It is primarily an infectious disease of the human alimentary tract, but may affect the brain, spinal cord and nervous system. Polio occurs with higher frequency in areas with overcrowding and poor sanitation. Cases are more likely to occur during the rainy season (July-September). The disease is widespread both in rural and urban areas. Polio continues to be a serious health problem to infants and children in India. An estimate of 2,00,000 cases of parasitic polio occur annually in the country.

Air

Air is part of man's environment. It is the basis of all forms of life. Apart from supplying the life-giving oxygen, air serves many other functions. The human body is cooled by air contact. The special senses of hearing and smell are mediated through air-borne stimuli. Some disease agents are also carried by air.

Ind Indian Council of Medical Research, Viral Hepatitis, Proceedings of the task force held on Jan. 8, 1980.
The health effects of air pollution are both immediate and delayed. The immediate effects are borne by the respiratory system, especially lungs which results in the occurrence of acute bronchitis. If the air pollution is intense, it may result even in immediate death from suffocation. The remote effects of air pollution are: (1) chronic bronchitis, and (2) lung cancer. Anthropod born diseases constitute a major death problems in India. Three types of transmission cycles are involved in the spread of anthropod borne diseases such as (a) Director contract i.e., transferred to man to man through contact. \[57\]

**EXCRETA DISPOSAL**

**Health Hazards**

Human excreta is a source of infection. It contains pathogenic bacteria, viruses, protozoa, helminthic parasites and their eggs. The diseases associated with improper excreta disposal are: typhoid and paratyphoid fevers; diarrhoea and dysentery; intestinal worms such as round worm and hookworm; cholera; poliomyelitis; viral hepatitis and a host of others. Statistics indicate that more than 50 million people in India suffer from these infections.

**Arthropods**

There are numerous arthropods in the environment. Many of them are of no significance. But there are a few which bite or infest man and transmit disease. In India, arthropod-borne diseases are numerous. It has been estimated that about 50 per cent of total deaths in this country are due to arthropod-borne diseases. The important

---

arthropods of medical importance in this country are: Mosquitoes, Housefly, Sandfly, Rat fleas and cyclops etc.\textsuperscript{58}

All arthropods do not transmit disease the same way. Broadly, there are 3 ways in which arthropods transmit disease: (1) Direct contact: Some arthropods spread disease by direct contact. For example, the itch mite which causes scabies is spread by direct contact. (2) Mechanical transmission: Some arthropods spread disease mechanically by carrying the infection on their bodies. The common housefly is an outstanding example; it spreads diarrhoea, dysentery and typhoid by mechanical transmission. (3) Biological transmission: When the disease agent multiplies or undergoes some developmental change in the insect host, it is known as biological transmission. The transmission of malaria and filaria by the mosquito, and plague by the fat flea are examples of biological transmission.\textsuperscript{59} Anthropoid borne diseases constitute a major health problem in India. Malaria disease promotes and annal morbidity of 4-5 million cases whereas it is estimated that 236 million people live in fileria endemic areas in India.

Mosquito

Mosquitoes are found all over the world. There are two main tribes of mosquitoes in India, i.e., Tribe \textit{Anophelint} and Tribe \textit{Culicint}. The tribe \textit{anophelini} contains only one genus, \textit{Anopheles}. The tribe \textit{Culicint} is represented in India by 15 genera of which the important ones are \textit{Culex}, \textit{Aedes} and \textit{Mansonita}. The male mosquitoes do not bite. Only the female mosquitoes bite because they need blood for laying eggs. They are more abundant during rainy season, as the water provide ample opportunities for breeding eggs


\textsuperscript{59} Parks, J.E. and K. Parks, \textit{op. cit.}, p. 409.
and their multiplication. There are three types which spread the diseases in India and include: Anopheles (Malaria), Culex (Filaria, Encephalitis), Aedes (Dengue fever, Haemorrhagic fever).\textsuperscript{60}

**Cholera**

Cholera is an acute, infectious disease caused by cholera vibrios (\textit{Vibrio cholerae}). Typical cases of cholera are characterised by repeated purging and vomiting leading to rapid dehydration, often resulting in death. It is transmitted by ingestion of contaminated water, food or drink.\textsuperscript{61} Cholera has been present in India since ancient times. During the 19\textsuperscript{th} century, several pandemics of cholera originated from India and spread to the western countries. Currently, the larger endemic foci of cholera are found in Maharashtra, Tamil Nadu, Andhra Pradesh, Karnataka, Delhi and Kerala. These states account for about 80 per cent of reported incidence in the country. Although the incidence of cholera has significantly declined in India in recent years, the potential of its epidemicity still exists because of poor environmental conditions. Cholera affects mainly low socio-economic groups with poor personal and environmental hygiene and affects all ages. The cholera is transmitted by ingestion of contaminated water, food or drink.\textsuperscript{62}

A cholera chart covering the 57 years from 1877 to 1930 reveals that cholera epidemics invariably occur in India during great religious festivals or fairs (meals), when literally millions of pilgrims throng the numerous sacred places. In 1900, for instance, at the time of the famous Kumbh mela which takes place every 12 years at Allahabad,

\textsuperscript{60} Ibid., pp. 410-413.
8,00,000 cholera deaths were reported. Each of the two previous years there were only 2,00,000 cholera deaths and each of the four following years after the melas, 2,80,000. Assisting the Government agencies in carrying out intensive education, inoculation and ‘preventive’ campaigns, the Christian hospital staffs are doing much to help decrease the number of cholera deaths.

**Typhoid Fever (Enteric fever)**

Typhoid fever is an acute communicable disease caused by *Salmonella typhi*. The disease is marked by prolonged fever, toxic symptoms and constitutional disturbances. The term “enteric fever” includes both typhoid and paratyphoid fevers. Typhoid fever is widely prevalent in India. This is mainly due to poor standards of drinking water, open air defecation and lack of sanitation. According to official statistics 3,52,980 cases and 735 deaths were reported from enteric fever in India during 1952.

**Malaria**

Malaria is a mosquito-borne febrile disease caused by the malarial parasite (Plasmodium). It is transmitted to man by the infected female Anophopheles mosquitoes. It is characterised by fever which comes on with chills (rigor) and leaves with sweating. Malaria is a major public health problem in India. An estimate of the problem of malaria made in 1935 indicated an annual incidence of 75 million cases of malaria with 8 lakhs deaths and an annual economic loss of Rs.10,000 million per year.

---

64 Dutt, P.R. *Rural Health Services in India*, Central Bureau of Health Education, 1965, New Delhi, pp. 127-130.
The eco-system of the country has been constantly changing due to indiscriminate exploitation of forests and movement of population with low immunity into forest areas result in malaria epidemics. Further the problem of malaria eradication has been complicated by two developments that took place, viz., insecticide resistance by malarial vectors, and drug resistance by the malaria parasite.\textsuperscript{66}

It is estimated that in India 20\% of the deaths are due to malaria, and these numbered 15,00,000 in 1939. It is impossible to calculate the number of days lost daily by the labourers through malaria. The Dutch quinine monopoly with its selfish policy of limiting supplies in order to keep up a high price, has brought indescribable suffering to countless malaria victims. Having seen such mass suffering himself during his arduous research work in India one can well appreciate Sir Ronald Ross\textsuperscript{67} sentiments and emotions when finally in 1897 he succeeded in solving the mystery of malaria germ cycles in both mosquito and man.

\textbf{Round worms and Hook worms}

The Roundworm and Hook worm infestation is wide spread in India. The round worm resembles an ordinary earth worm and measures 20 cm in case of male and 45 cm in case of females. The parasite in the form of minute eggs robs into human host of children through contaminated food and drink. The infective eggs are ingested, they reach the small intestine and cause intestinal obstruction in children.

The Hook worms in the form of ineffective larvae penetrates into the human body when a human being walks bare foot on the contaminated soil or water. The larvae

\textsuperscript{66} Ibid.
\textsuperscript{67} Ibid.
finally reach small intestine particularly jejunum and settles there. It is believed that the hook worm is 8 to 10 mm in length and survives for an average of 1 to 4 years. The disease is highly endemic in tea gardens of Assam, West Bengal, Kerala and parts of coastal areas in the states such as Andhra Pradesh. The ill effects of hook worms cause chronic blood loss often resulting in anaemia, loss of body resistance and even the heart failure.

It has been estimated that about 45 million people in India are infested with hookworms. The disease is highly endemic in Assam (tea gardens), Kerala, West Bengal, certain parts of Uttar Pradesh, Bihar, Orissa, Andhra Pradesh and Tamil Nadu.  

Lymphatic Filariasis

Lymphatic filariasis is a mosquito-borne disease caused by the filarial parasites, W. bancrofti and B. malayi. It is transmitted by the bite of culex mosquitoes. The main clinical features are: attacks of fever, lymphangitis and elephantiasis of genitals, legs and arms. The disease is not fatal but is a cause of great suffering, deformity and disability. Lymphatic filariasis is a major public health problem in India. It is widely distributed in India. The heavily infected areas are Kerala, Andhra Pradesh, Orissa, West Bengal, Tamil Nadu and certain areas in Uttar Pradesh, Madhya Pradesh and Bihar. According to recent estimates about 420 million people are living in filaria-endemic areas in the country.  

Parks, J.E. op. cit., pp. 165-167.  
Ibid., pp. 180-181.
Leprosy

Leprosy is a chronic disabling disease caused by *Mycobacterium leprae*. The disease affects mainly the peripheral nerves. It also affects the skin, muscles, the eye, bones, testes and internal organs. It has been estimated that there were about 0.9 million cases of leprosy in the world. Most of the cases occur in Asia and Africa. India alone accounts for 55 per cent of the leprosy cases in the world and about 87 per cent in the SEAR countries, i.e., about 0503 million cases. The deformity rate among the total active cases is approximately 6-8 per cent for the year 1997-98. The states badly affected are Tamil Nadu, Andhra Pradesh, West Bengal, Bihar and Orissa and to a lesser extent in Madhya Pradesh, Maharashtra, Karnataka, Kerala. The overall prevalence of leprosy in India is estimated as 5.3 cases per 10,000 population. A WHO Expert Committee on Leprosy (1966) suggested that when the prevalence rate is around 1 case per 1,000 population, leprosy should be considered an important public health problem.

Rabies

Rabies, also known as hydrophobia (fear of water) is primarily a disease of warm-blooded animals such as dogs, cats, jackals, wolves, etc. It is transmitted to man by the bite or licks of rabid animals. Mortality is nearly 100 per cent. Rabies occurs in all parts of India with the exception of the Lakshadweep and Andaman and Nicobar islands.

---

71 Ibid., pp.
73 Central Research Institute, Kasauli, Principle and Practices of Antirabic Treatment and Control of Rabies, Govt. of India, New Delhi, 1979.
Sexually Transmitted Diseases

The sexually transmitted diseases (formerly known as venereal diseases) are a group of communicable diseases that are transmitted predominantly by sexual contact, and caused by a wide range of bacterial, viral, protozoal and fungal agents and ectoparasites.\(^{74}\) STDs constitute a major problem in India, next only to malaria and tuberculosis. Syphilis and gonorrhoea are widely prevalent in India. The prevalence of gonorrhoea is unknown. The trend in gonorrhoea and syphilis is on the increase. STD are often called “social” diseases. The basic social factors responsible for the spread of STD is prostitution. Other contributory factors are broken homes, family quarrels, marital disharmony, poverty, alcoholism, etc.\(^{75}\)

MEDICAL SERVICES

Frequent newspaper headlines such as the following make a missionary sick at heart: Malaria creates havoc; Cholera Rages at Mela; Pilgrims Spread Plague and Smallpox; Heavy Toll of Cholera Victims, 6,00,000 Blind in India; Evil of Medical Quacks Increases, Spurious Drugs Cause Deaths; Dead Viper in Teapot Kills Four. More heart sickening news items: “In 1917 the public of Bombay took a keen interest in the care and protection of children, though long before they had been interesting themselves in the care and protection of animals”.\(^{76}\) In view of the fact that most babies get insufficient milk and that more than half the cows are useless this information from Gandhi’s weekly paper sounds pathetic: “India worships the cow, and cow’s milk is unprocurable in the majority of our villages”.\(^{77}\) “With Hindus cowslaughter is the

\(^{76}\) *Indian Social Reformer*, December 14, 1940, p. 39.
\(^{77}\) *Harizan*, March 7th, 1936.
greatest sin one can commit," proclaimed the president of the Hindu Mahasabha when protesting against the elimination of cows not producing milk. Again,--a ten inch newspaper 'ad' tells about a certain scripturally prepared medicine which cures 15 different diseases etc. The Hindu editor of a weekly confesses "I have no convinced belief in the theory of the rat being the chief cause or agency in the dissemination of plague", and this in spite of the fact that the responsibility of the rat has been well established by scientific proof. Being miles away from any kind of efficient medical service countless people resort to the use of opium to bring relief from pain. They also give it to babies to keep them quiet while the mothers are at work in the fields or the factory. Able to point to the excellent health of their own children who are not given opium, the missionaries and convert have an easier task of discouraging the custom than others who may be suspected of giving it to their children secretly.

Climate is one of the handicaps for the spread of diseases. Apathy, superstition, fear, bad housing, overcrowding, inadequate and unsuitable diet, and many social usages and social customs inimical to the growth of a healthy public life hold up in all directions the efforts of government departments, medical organizations, doctors, educational agencies and courageous voluntary workers in town and village to bring down the toll of preventable diseases to less appalling figures."

In 1934, the death rate by communities per 1,000 was: among Hindus 28, Moslems 24, Christians 16, others 25. Infant mortality in 7 Provinces was: Hindus 195, Moslems 183, Christians 118 (England 59). Life Insurance rates for Christians in the

---

78 Indian Social Reformer, October 18, 1939, p. 45.
79 Fishman, A.T. The Culture Change and Under Privileged, C.L.S., Madras, 1941, p. 45.
Christian Mutual Insurance Company of Lahore are lower than those of other companies because their average life-expectancy is higher than among Hindus and Moslems.81

It is estimated that 2,00,000 mothers die at childbirth annually from preventable causes. One of the reasons for this appalling death toll is the custom of keeping girls and mothers in ‘purdah’, indoor isolation, away from fresh air and sunshine.82 Again, 33% of stillbirths and child deaths and mother maternity deaths are due to untrained and unintelligent midwives, most of whom are from among the low caste groups.83 For the 17,10,00,000 female population of India there were only 600 qualified lady doctors in 1935. In 1941, there were 148 missionary lady doctors and 199 Christian Indian lady doctors. One medical report states that ‘in a land of 25 million women there cannot be found even 2,500 trained nurses.’ In 1941 there were 308 foreign trained nurses and 1,038 Indian Christian trained nurses. Very slowly Hindu and Moslem young ladies, especially widows, are entering the nursing profession after the Church has done the pioneer work.84

Carelessness and ignorance regarding the care of the eyes are largely responsible for the fact that India has 6,00,000 blind and three times as many who are partly blind. Institutions to care for them, or to train the young blind, are pathetically few. Believing that it is their ‘fate’ India is largely apathetic, almost merciless, towards them. Malnutrition is no less a contributing cause to impaired vision. Again, in the work of restoring sight to the blind the Church has done pioneering service. Dr. Wanless of Miraj

alone has performed 10,000 cataract operations during the 30 years 1889-1928, serving the poor as well as those who were able to pay. In rural Bengal and Bihar, Dr. Macphai has 5,000 eye operations a year of which 2,000 are for cataract. To these figures one may add many thousands more of other Christian hospitals where the various eye diseases are treated and people are taught to 'use clean bandages and not to apply grease from the hubs of dusty carts as eye ointment'.

Prevention of the said diseases requires specially trained health officers, and the means at their command to enforce their ideas, to wit, a large staff of visiting nurses; an army of public vaccinators; employees who will catch rats, clean drains, fumigate houses, kill snakes, shoot tigers, destroy mosquitoes, sand-flies and flies, disinfect wells, tanks and streams, dispose of night soil and garbage etc. Sanitary engineers and their staffs must drain hundreds of square miles of swamps; provide pure, abundant water supplies, and arrange for the sewage disposal of villagers and towns as well as of cities; scrutinise and supervise schools, temples theatres and other public buildings. Facilities for instructing the public through its current vernacular literature, through primary and secondary text books, through specially prepared charts and posters, through lantern lectures and cinemas, must not be neglected. A properly constituted department of health will investigate, furthermore, the food values of grains and vegetables; will prevent the adulteration of milk and other foods; will regulate the preparation and use of poisonous drugs; will eliminate the use of the flesh of diseased animals; will determine the qualifications for the practice of medicine, nursing and dispensing; will prevent the sale

---

86 Park, K. *op. cit.*, p. 96.
of patent medicines of an unknown or a harmful nature; will control or seek to abolish brothels; will take measures to check epidemics and to eradicate the foci of the serious endemic diseases; will control immigration; will regulate the publication of articles and advertisements that might mislead the public concerning the care of the health or the cure of disease; will provide research laboratories for the study of disease.87

GOVERNMENT AND HEALTH CARE

The Madras Medical Board had set up a number of temporary hospitals in 1819. It was found that Indians evinced a great reluctance to stay in them for a day. Although accounts of early epidemics spoke with remarkable confidence of the success of European medical therapies in treating cholera and other epidemic diseases and saving lives, there were growing doubts among western practitioners about value of their treatments and remedies in India. William Scot of the Madras Medical Board acknowledged cholera to be perversed and wily adversary. "In no disease" he remarked in the 1840's," has the sovereign efficacy of numberless specifics been more vaunted and in none have the utmost efforts of the medical art been frequently insufficient, than in cholera.88 However by the beginning of the twentieth century, western physicians could at least draw solace from the fact that sanitary measures adopted showed some success in preventing or containing the disease.

In the Madras Presidency, the Public Health Department was started as early as in 1864 when a Sanitary Commission was formed in the Presidencies of Madras, Bombay and Bengal. In 1869 the Sanitary Commissioner took over the functions of the

87 Ibid., p. 42.
Commission. Vaccination was the first public health work undertaken by this new organisation. Later this work was entrusted to the Revenue and Medical Departments by turns and in 1922 after several experiments it was handed over to the Public Health Department. Registration of births and deaths became compulsory in the erstwhile Madras Presidency under the Births and Deaths Registration Act of 1899 and the Madras Municipalities Act. From 1895 to 1914 various courses of training were organised and several batches of Sanitary Inspectors were trained. In 1915 a “Pilgrims Committee” on fairs and festivals was formed and this committee submitted proposals on the sanitary arrangements needed in future. The health education drive was also organised in the State in the same year with a great deal of success.89

In 1911, a Malaria Board was constituted and towards the close of 1920 it was amalgamated with the Sanitary Board forming the “Public Health Board” with the Minister for Health as President and the Sanitary Commissioner, the Sanitary Engineer and the Secretary to Government in the Public Health Department as members. The Sanitary Commissioner later on became the Director of Public Health assisted by a few Assistant Directors of Public Health, each in charge of subjects like vaccination, epidemiology, Vital Statistics etc.90 In 1919, Public Health became a transferred subject with the main responsibility relating to public health administration resting with the local bodies under the Local Boards Act and the District Municipalities Act.

In 1912, an epidemic of Cholera caused great anxiety in northern Coastal Andhra.91 Anti-Cholera measures, both preventive and curative, proved ineffective in

---

90 Ibid., p. 38.
91 Report, CBTM, 1913, p. 59.
controlling and combating this epidemic. This unsatisfactory state of sanitary administration prompted the Government to constitute the “District Health Scheme” in 1922. Under this Scheme Assistant Health Officers were employed by the local bodies to work as District Health Officers in the urban areas. Health offices were also attached to Municipalities. The Director of Public Health was to supervise the working of district health schemes relating to vaccination, epidemics, fairs and festivals, vital Statistics, maternity and child health, malaria etc. with the assistance of the Assistant Directors of Public Health each in charge of subjects.

In April 1924, the Government provincialized and gazetted the post of Health Officers. The District Health Officer was charged with the duties prescribed in the Health Code Volume I of the Madras Public Health Code and he was made responsible to the Director of Public Health and to the President of the District Board. The Municipal Health Officer performed duties prescribed in the Public Health Code and was made responsible to the Director of Public Health and also to the Executive Authorities of the Municipality. In 1939 the Public Health Act\(^\text{92}\) came into force and revolutionised the whole set up of health and hygienic conditions. Under sections 7 and 8 of this Act, the Government vested the Director of Public Health with the control of the Public Health Administration under Local Bodies, and as per Sections 8 and 9, the Government was to appoint Health Officers who were to work under the local bodies. These officers were vested with various responsibilities with statutory powers under the Public Health Act. The Director of Public Health was to exercise his powers through the Health Officers.

Sanitation

The Madras Local Funds Act IV of 1871 and the Madras Towns Improvement Act III of 1871 were the earliest enactments in the erstwhile Madras Presidency regarding sanitation in the rural and urban areas respectively. These Acts were later replaced by the Madras Local Boards Act of 1884 and the Madras District Municipalities Act of 1884. Under these enactments, sanitation was made the exclusive responsibility of the Local Bodies.93 The Madras Public Health Act of 1939 embodied most of the provisions essential for the improvement of public health. Apart from these legislative measures, steps were also taken by the Government to establish a well organised Department of Public Health in the erstwhile Madras Presidency. In course of time, District Health Officers were appointed to attend to the public health matters in the district in accordance with the District Health Scheme. The Bhore Committee of 194594 highlighted the need for the implementation of a health programme along with the provision of medical relief. During the plan periods, a number of primary health centres providing preventive and curative treatment were set up in the districts.

DRINKING WATER

The supply of safe drinking water is also taken care of in the area under consideration. People generally depend on irrigation canals and tanks, supplemented here and there by draw-wells and bore wells, to procure their daily supplies of drinking water. At some places on the seacoast, where only brackish water can be tapped, people suffer acutely when the irrigation canals and tanks dry up in summer. In the hilly tracts

94 Ibid.
and the upland areas, people depend mainly on springs and streams. They scoop chelamas (water-holes) in the bed of the streams to procure water for their daily requirements.\(^95\)

The responsibility of providing drinking water in the rural as well as urban areas developed on the Local Bodies in the second half of the environs century, but they could do no more than merely deepening a few wells, construct a small number of new wells and convert a few step-wells into draw-wells. Greater attention began to be bestowed from about 1913 by the Government on the question of water-supply.\(^96\) This was largely motivated to check the outbreak of epidemics, but this suffered a set-back in the years following 1921-22. The Government, however, contributed their share to the rural water-supply schemes of the Local Boards which received the approval of the sanitary and engineering authorities. The period between 1925 and 1936 was marked by two important developments, namely, (1) sanction of half grants to the District Boards in 1925 for the implementation of the water-supply schemes and (2) sanction of liberal grants by the Central Government in 1936 to facilitate the development of rural areas, which included improvement of water-supply as well in this district. The distribution of grants to Local Boards was, however, given p in 1938 and a ten-year rural water supply programme was drawn up for the district in the same year. This was replaced by an annual scheme prepared by the District Collector in 1941.\(^97\)

---

\(^95\) Ramesh, N. *West Godavari District Gazetteers*, Hyderabad, 1979, pp. 209-211.
MEDICAL MISSIONARY ASSOCIATION

A Medical Missionary Association was formed in 1905 to bring together medical missionaries from all parts of the country for common counsel in 1926 blossomed as Christian Medical Association of India.98 The membership is open to all Christian medical practitioners, whether in Church or mission service or not, who hold a recognized qualification and are in sympathy with its aims. The C.M.A.I. is the central consultative and advisory body for the Christian medical enterprise in this country. It also sponsors various forms of medical education. Since 1931 it has had a Nurses Auxiliary. The point of view advocated by the C.M.A.I. is that the ministry of healing is not a mere adjunct of mission work, adopted perhaps as an aid to conversion, but itself as essential part of the work of the Christian Church. Just as the earthly ministry of our Lord included the healing of sick people, so the care of the sick is part of the ministry he committed to the Church. It is one of the ways in which the Christian dharma expresses itself.99

The Ministry of healing is an essential part of the work of the Christian Church whose mission it is to represent God as revealed in Jesus Christ. It is observed that Christ’s own testimony concerning His mission was that He came to do the will of the One who sent Him and to accomplish His work. It is believed that the ministry of healing the body is an expression of the attitude and mind of God toward man and has its source in the compassion and love of God.100 The conviction of the missionary is that the Christian should concern himself with the care of the sick, apart from whether others are

99 Firth, C.B. An Introduction to Indian Church History, ISFCK, Delhi, 1998, pp. 202-203.
100 Goheen, R.H. op. cit., p. 128.
carrying on this work or not. From this conviction, it becomes of the church duty to
develop Christian medical work as part of the essential work of the Church in India, and
to consider how this may best be done.

The recognition of the ministry of healing, as an essential part of the work of God
through the Church, involves the thought that the service thus rendered is a natural and
vital expression of the spirit of Christ. This can be engaged in by men and women
imbued with the spirit of Christ, who served men for love of them and Who, as evidence
of His Messiahship, drew attention to the work He was doing; “The blind receive their
sight, the lame walk, the lepers are cleansed, the deaf hear, the dead are raised up and the
poor have the Gospel preached to them”.101

The statement requires re-reading more than once before its profound
significance, its several implications can be grasped. Thoroughly scriptural in its major
premiss and unquestionable, it is in the minor premiss that one is made to pause. Here is
a new thought. To many it comes as a new light. New duties are assigned to every
Christian in India, that as in the West, if they have been understood, have hardly been
stressed widely or largely practised. It is true that in America, many churches nominally,
at least, conduct hospitals. Most of the large cities have their Presbyterian hospitals.102
St. Luke, St. Mary, St. Thomas and other saints have their names attached to the hospitals
of Methodist and Catholic and other churches. Catholic nursing sisters are rendering
highly appreciated service in a large majority of the city and private hospitals. It is true
that many of the public or city hospitals are supported by the donations of charitable

101 Holy Bible, Mathew 11:5.
102 Goheen, R.H. op. cit., pp. 128-129.
people.\textsuperscript{103} Christian philanthropists providing the largest quota. But it is equally true that the average Church member has escaped from the feeling of much definite and personal responsibility. He or she may, and often does, visit the sick in the immediate neighbourhood. Kindly human nature deserves the major credit for that. The local church may observe “Hospital Sunday” with a special collection annually,\textsuperscript{104} but beyond that very little official thought is given to every individual’s privilege and duty to help to carry on this phase of our Lord’s ministry as an outstanding phase.

Building on newer foundations in India, with the incentive of relatively greater medical needs, India’s Church must be shown her spiritual responsibility and encouraged to accept the unique opportunity that this conception discloses. Every Christian cannot, need not, be a doctor or a nurse. Every Christian can, in small ways and large, render assistance in the battle against disease, in the adequate care of the afflicted.\textsuperscript{105}

The Christian Medical Association of India that has brought forward this revelation may now be introduced. It is the child—that has outgrown its parent—of the old Medical Missionary Association. The latter organisation was formed at the general Missionary Congress in Madras in 1900 as a union of medical missionaries. The Association’s next General Conference met in Bombay in 1908, but until 1925 only one other general conference was held.\textsuperscript{106} Divisional or sectional branches, to correspond roughly with the Provinces of India, had been established, and some of these had held annual meetings. A quarterly publication, Medical Missions in India, had been the official organ of the Association almost since its founding.

\textsuperscript{103} Ibid., p. 130.
\textsuperscript{104} Ibid., p. 130.
\textsuperscript{105} Firth \textit{op. cit.}, p. 205.
\textsuperscript{106} Ibid., p. 211.
The word Devolution, a word used by the Christian educationalists since the World War, finally penetrated the tympanum of the average, busy medical missionary. At the General Conference in Calcutta in 1925, a new and larger Association was formed. According to its constitution not only medical missionaries may become members but—

"The membership of the Association shall be open to all Christian medical men and women who hold a recognised, registrable qualification or its equivalent, and who are in full sympathy with the main object, namely, the establishment of the Kingdom of Christ in India". 107 This, as is seen, admits private practitioners, Government officers, Indians and Westerners alike. With this organisation the Association falls into line with the principles of the National Christian Council, and has been accepted by the latter as its medical department. 108

The new Association at once appointed a Committee on Survey, Efficiency and Co-operation. This Committee of five members met in time with the secretaries of the National Christian Council. Important questions had to be faced. One of the most fundamental needs felt was for a definition of policy. Miss B.C. Oliver, Chairman of the Committee, had taken pains to gather statements of policy from various Mission Boards. The most suggestive and clear-cut aspects were formed as follows: 109

Medical work is not merely a key to open the door into non-Christian communities, but an integral part of the missionary enterprise. The onus of medical missions can be identified as general and specific aims.

108 Ibid.
109 Ibid.
The general aim of the medical missions is an integral part common to all forms of missionary work, that is, to lead people to Christ and to organise them into churches and train "them to self-propagation, self-support and self-government."

The specific aims of the missionary medical enterprises are numerous which include: (1) The relief of suffering; (2) Training a national Christian medical profession; (3) Removal of superstition regarding causes of disease; (4) Preventive medicine-public health; (5) To do these things in the name and spirit of Christ so as to strengthen the evangelistic work.\textsuperscript{110}

While everything possible should be done to alleviate suffering and save life, at the same time, the physician and nurse should aim to multiply their powers through the training of doctors and nurses, thereby establishing in the country an "indigenous Christian medical profession". The accomplishment or this purpose requires medical schools and hospitals, training schools for nurses, the creation of medical literature, and facilities for training in medical research and in the promotion of public health.\textsuperscript{111}

The duty of medical missionaries is not limited to the treatment of diseases that have developed. They are the health and sanitation officers of their respective stations with responsibilities for the prevention of disease.

The medical care of the missionaries and the institutions under their control is one of their chief responsibilities, and this service properly rendered can be utilised to increase greatly the efficiency and prolong the service of the entire missionary body.

\textsuperscript{110} \textit{Ibid.}, p. 132.
\textsuperscript{111} Firth op. cit., p. 207.
Social service by the medical staff should also be advantageously used for the removal of ignorance, poverty and vice, and undoubtedly is one of the most effective methods of evangelisation.\textsuperscript{112}

Both physician and nurse ought continually to manifest, fervent loyalty to the Lord Jesus Christ in order that His spirit may permeate the entire work and that the seed sown in loving service may yield a rich harvest of souls.

To summarise the aims of Medical missions:\textsuperscript{113}

1. Every Christian in India is to be shown his privilege and duty to further the work which Christ Himself did, to care for the sick under the compelling love and compassion of God.

2. This enormous task—even if it could be or was being overtaken by appropriate Government departments, private efforts or by other charitable organisations—does not rid Christian missions of their responsibility and their privilege to aid in the care of India's afflicted. This is a definite challenge.

3. Institutions, such as hospitals, dispensaries, asylums, sanatoria, baby-folds, blind schools, \textit{et alia}, must be provided and maintained wherever most needed. Private practitioners must be encouraged and aided in their work. The prevention of disease must be studied and developed in every possible way.

\textsuperscript{112} Salmon Doraiswamy. \textit{Christianity in India},
\textsuperscript{113} Firth, \textit{op. cit.}, pp. 210-213.
4. Helpful co-operation is to be achieved with similar Governmental agencies, with private or organised charities; infusing into them all a lofty arid loving altruism. Co-operation with the educational, evangelistic and social-service branches of missions must be developed to the greatest usefulness.

DISPENSARY

Dispensary is usually the starting-point in the development of a medical mission. Every mission hospital conducts at least one dispensary for the treatment of "out-patients". It may have several, or many, as in the case of the Medical Mission in South Travancore, with its hospital at Neyyoor and its seventeen branch dispensaries. In the dispensary there may be accommodation for a few "in-patients", and if the number of beds provided exceeds ten, the designation "hospital" is applied. Regular hours are allotted for the examination and treatment of patients. There may be a charge made to all who apply, but usually this is sufficient to cover only a fraction of the cost of the medicines supplied. This is true of the majority of mission dispensaries. Such a dispensary, then, may be classed as "charitable" but not "free". However, there are many mission dispensaries that give entirely free treatment. In a few others only voluntary offerings are accepted. In a few others self-support is attained from the charges made. No general rule for charges for all of India would be satisfactory. The ability of the clientele to pay is the best criterion for a given place, but it is certain that large numbers in every locality deserve free treatment (perhaps 15% of the total population, as suggested before). In the list of the Christian Medical Association, there are 192 mission dispensaries, but there are probably some 50 others not listed. A recent inquiry has elicited replies from 113 of

---

which 21 were closed. These 92 dispensaries treated in one year 4,35,829 new and 5,88,625 returning patients, 6,35,652, or about 60 per cent, having been given free treatment. The medicines are usually given for one or two days at a time; to those coming from a distance, for four, six or eight days.\textsuperscript{115}

In dispensaries good opportunities are afforded for presenting the Gospel message. In the dispensaries people of all ages and many strata are gathered. They have leisure for the time being to listen. They have come voluntarily. Many will buy Scripture portions or accept tracts. In some dispensaries the card bearing the patient's name and serial number contains also a Bible verse or message. He keeps this card for future presentation. In a few dispensaries the patient is expected to buy a Gospel, and his serial number is written on the fly-leaf. Thousands of Gospels are thus distributed.\textsuperscript{116}

Leaflets on the nature of the disease from which he suffers, with appropriate instructions, are given to patients in a few mission dispensaries. The Jumna Mission dispensaries in Allahabad have set a good example in this line. More general use could be made of this valuable method. In connection with the dispensaries just named, this opportunity is taken to mention the co-operation which Dr.- Forman has obtained from charitably-minded non-Christian Indian doctors. A dentist, two gentleman doctors and a lady doctor thus give their services free in the daily clinics held in one of these dispensaries.\textsuperscript{117}

\textsuperscript{115} Ibid., p. 137.
\textsuperscript{116} Ibid., p. 136.
\textsuperscript{117} Ibid., p. 137.
ROADSIDE DISPENSARY

The "Roadside Dispensary" is one that needs explanation. It was first at Vellore, one understands, that a weekly run out along a road to a distance of some eighteen miles was made in a motor-car. This was started and has been kept up for twelve years or more by Dr. Ida Scudder. An assistant and students go along. Stops are made under trees near villages every few miles, where patients will gather for treatment. Rain or shine this trip is made, and, lately, at the terminal town a dispensary building has been instituted, where a medical assistant is stationed, and where she conducts a daily dispensary. In a single trip occupying a full day from 75 to 150 patients may be seen and treated. Even lepers congregate under the trees, and are given their injections. While returning, the car is available for 1 patients who need and will accept hospital treatment.\textsuperscript{118}

Hospitals

"The Hospitals" are required for the more seriously ill. There are many diseases that will not yield promptly or at all to simple remedies. Prolonged efficient nursing may be required, as in typhoid fever, or surgery may be necessary, as in the case \textit{or} most tumours. Midwifery also is best undertaken in hospitals, even when in the homes sanitation and hygiene are above reproach. In fact, in all but the simpler ailments, where \textit{vis medicatrix naturae} can be trusted, treatment in a hospital is the safest course.\textsuperscript{119}

To be efficient a hospital requires a certain standard modicum of buildings, equipment and staffing. It must be, above all other buildings, sanitary through out the year. An operating theatre with marble floors and tiled walls cannot carry all the responsibility; the wards, rooms, lavatories and even verandahs must be capable of being

\textsuperscript{118} Goheen, R.H. \textit{op. cit.}, p. 137.
\textsuperscript{119} \textit{Ibid.}
kept clean, free from germs as well as dust. This indicates substantial buildings with washable floors and, preferably, non-absorptive walls. Ventilation and lighting are important. Electric lighting and piped water are rightly regarded in these days as essentials. A convenient arrangement of all the component rooms, rendering them easy of access, is most desirable to facilitate nursing. The provisions for serving food must be carefully arranged for. In most mission hospitals the relatives of patients, for the most part, provide the food. They may prepare it in the numerous hospital-kitchens, which is preferable, or bring it from their own homes or other domiciles in the town. The hospital, however, must usually have at least one cook—a high caste Hindu will be the best solution—to serve the indigent or those patients who are unattended by relatives. Many all Indian patient is found to need sufficient and proper food quite as much as, or more than, medicines. The dieting of patients is a very important department.  

Along with other important equipment, the furniture and instruments for all kinds of surgery, an X-ray outfit and good laboratory facilities are essentials. Diagnosis can only be made properly by the last two means in many cases. Life can only be saved or prolonged by the first in not a few conditions.

The number of beds in India’s mission hospitals varies from ten to two hundred. Recently the Christian Medical Association appointed a committee to draw up a list of the essentials for a fifty-bed hospital. This unit was adopted, as it has been found desirable, by experience, to have at least two full-time doctors on the staff. A qualified medical assistant is also needed. There should be two compounders and about ten nurses,

\[1^{20} \textit{Ibid.}, \text{p. 138.}\]
\[1^{21} \textit{Ibid.}, \text{p.139.}\]
and a missionary nurse as superintendent. It has been found best to employ male nurses in men's hospitals in India. These are usually trained in compounding also, and so receive the title of "nurse-compounder", though "wardmaster" and "brother" are sometimes used.

The training of nurses is a function of many of the larger hospitals. Mission boarding-schools supply most of the candidates, and they should have had at least four years of education in English, since the hospital records are invariably kept in English. The nurse must be able to read and understand them, and to enter her own notes. In some hospitals, she is permitted to enter her notes in the vernacular. After finishing a probationary period of from three to six months, a three years course of study is taken. After graduation the nurse may remain on the staff of her hospital, but many are inclined to seek more remunerative service in the large city hospitals.

The financing of hospitals is a problem that draws forth much discussion. Much money is involved. As per statistics of 1950, for the fifty-bed hospital that will treat about 1,000 in-patients a year, and perhaps 7,000 out-patients, an annual budget of no less than Rs. 20,000 is desirable. This excludes missionaries' salaries. Each in-patient will cost about Rs. 15 and each out-patient about 12 annas. The Rs. 20,000 will not cover the cost of replacing all expensive apparatus nor of extensive repairs. 122 It is really too modest a figure, but most mission hospitals in India manage, somehow, on less. Towards meeting the annual budget local receipts from fees and gifts will yield from one-fifth to the entire amount. There are now about a dozen "self-supporting" mission hospitals in India (missionary salaries again excluded). The majority of the hospitals meet one-half

122 Ibid., pp. 138-139.
or more of their expenses from local receipts. In this connection, it is observed that the poor patients need free medicine other were the payment of fee might over show the very purpose of missionary healing activity.\textsuperscript{123}

There are now 212 mission hospitals in India, distributed as follows:\textsuperscript{124}

\begin{tabular}{ll}
Aden & .. \hspace{0.1cm} 1 \\
Assam & .. \hspace{0.1cm} 9 \\
Baluchistan & .. \hspace{0.1cm} 1 \\
Baroda & .. \hspace{0.1cm} 1 \\
Bengal & .. \hspace{0.1cm} 10 \\
Bihar and Orissa & .. \hspace{0.1cm} 13 \\
Bombay Area & .. \hspace{0.1cm} 21 \\
C.I. & .. \hspace{0.1cm} 5 \\
C.P. and Berar & .. \hspace{0.1cm} 12 \\
Delhi & .. \hspace{0.1cm} 1 \\
Gwalior & .. \hspace{0.1cm} 2 \\
Hyderabad & .. \hspace{0.1cm} 11 \\
Kashmir & .. \hspace{0.1cm} 3 \\
Madras & .. \hspace{0.1cm} 59 \\
Mysore & .. \hspace{0.1cm} 7 \\
N.W.F. Provinces & .. \hspace{0.1cm} 4 \\
Punjab & .. \hspace{0.1cm} 27 \\
Rajputana & .. \hspace{0.1cm} 8 \\
U.P. & .. \hspace{0.1cm} 17 \\
\end{tabular}

The Gospel message in a Christian hospital falls on hearts that are softened by suffering. Such hearts are often longing for a comforting assurance. The attending relatives and friends are in a state of sympathetic anxiety. As improvement in a patient’s condition becomes manifest there is added a sense of gratitude, felt among all concerned. No more fitting soil for God’s message can be found. The average stay of a patient in hospital is about a fortnight. During these days much can be learned. Many false concep-

\textsuperscript{123} Women’s Missionary Society, the United Lutheran Church in America – India an opportunity and conquest, Philadelphia (No author, No date), pp. 22-25.

\textsuperscript{124} Ibid., p. 140.
tions and prejudices at least will be dispelled. The doctors and nurses in most hospitals take a definite part in giving the message. They are usually assisted by the part-time service of one or more evangelists and Bible women. Evangelistic workers in the districts invariably find that people who have been to a hospital give them a cordial reception and listen attentively to their message.\textsuperscript{125}

\section*{Sanatoria}

The proper treatment of pulmonary tuberculosis is a speciality and demands for itself special institutions. These are best situated in a favourable climate and at a moderate altitude of 2,500 to 5,000 feet. Large open sites among hilly or rolling country are desirable. The advantages of isolation are thus also obtained, for this form of tuberculosis is contagious. The disease is spreading rapidly and now ranks as one of the most common causes of death in India.

Missions have been called upon to enter this field where fearless, self-sacrificing, attentive service is needed. It is a field that has been neglected too much by other public and private agencies. There now exist eight mission sanatoria three in the Bombay Presidency; two in Rajputana; one each in the Central Provinces, United Provinces and Madras Presidency. All of these except one are comparatively small and inadequate. The one at Arogyavaram,\textsuperscript{126} Madras Presidency, is, however, as has been said, the largest and best sanatorium in India. It has 150 beds. Eleven missions co-operate in its maintenance, and the Madras Government gives a goodly grant-in-aid. For the other Provinces of India a similar Union Mission Sanatorium is indicated. The missions of

\textsuperscript{125} Augusta High hand, \textit{India}, Printed for congregational Life and Growth of Board of Foreign Missions, Philadelphia (ND), pp.24-28.

\textsuperscript{126} Firth, \textit{op. cit.}, pp. 208-209.
Bombay and of the Punjab are taking steps to develop such sanatoria, and they deserve every encouragement. Other Provinces should do likewise.\textsuperscript{127}

The smaller institutions which exist in various parts of the country are also needed. Particular interest attaches to one not yet mentioned. It is conducted by the Christian Church at Rajahmundry,\textsuperscript{128} independent of mission initiative. This Church has secured a pleasant site about two miles out from the city, on a low hill-top. Here several substantial foundations for wards were laid, the superstructure being, for lack of funds, of thatch. About a dozen patients can be cared for. A qualified Christian doctor is in charge, whose salary of Rs.150 a month is met, with other current expenses, by the Church. This is a most praiseworthy enterprise.\textsuperscript{129}

The Care of Lepers

Of the 66 leper asylums in India conducted by missions, 37 belong to the Mission to Lepers and all but six of the others are aided by it. This mission thus assumes the entire care of 5,228 lepers and shares in the care of 1693 more. It also conducts about twenty homes for untainted children, and aids in the support of four other such homes in India.

Leprosy is a chronic disease in which, often for long periods at first, there are but few symptoms. The onset is usually insidious and the first patch may be discovered accidentally. Later on, when the skin is affected by many bacilli, nodules are present; and such cases are decidedly contagious. Gradually a resistance may be developed; the

\textsuperscript{127} Ibid., p. 209.
\textsuperscript{129} Ibid., p. 219.
bacilli are overcome but not before they have injured the nerves of the face, arms or legs. These affected nerves in turn, failing to function properly, allow contracting deformities to develop. The areas supplied by injured nerves if are poorly nourished; bone absorption occurs; and secondary infections easily occur. Insensitive areas are also injured by burning, etc., and the resulting ulcers heal very slowly. It is only in the very early stages that there is much hope of arresting the disease before much damage is done. Even this may take months to accomplish. Those in the later stages, with infectious nodules, or, lastly, with trophic ulcers, may, for all practical purposes, be considered patients for life.130

In properly conducted leprosaria the patients are grouped and housed according to the stage of their disease, and appropriate treatment is given. This requires a trained medical staff and the proper facilities for their use. Many patients are able to work at their trades in the institution, or can be taught simple farming that will interest them and return an income to the institution.131

The finances of such institutions show a per capita cost of from Rs.7 to Rs.17 a month as per the routine expenses of 1950’s.132 It is probable that where the latter figure obtains better results will be found. Since there are at least 300,000 lepers in India (some authorities make the number larger) their care calls for a large philanthropy and it is creditable that missions have heard and are heeding this call. But much more needs to be done.

131 Ibid., p. 7.
132 McKenzie, John, op. cit., p. 98.
Medical Schools

The three Mission Medical Schools include two for women, one each at Ludhiana and Vellore, and one for men at Miraj.\(^{133}\) Formerly, two other small schools for men existed at Neyyoor and Jammalamadugu respectively, both stations of the London Missionary Society. But both of these schools, after each training about fifty men, were closed more than a decade ago. The Edinburgh Medical Missionary Society also established at about the same time a Medical Training Institute for men at Agra, using a Christian Hostel for the purpose in connection with the Government Medical School. This Society still gives scholarships to Christian men from North India for medical training.\(^{134}\)

The importance of providing a body of Christian men and women to staff the large number of existing mission hospitals and dispensaries—about 400 institutions in all—not to speak of the unsupplied villages of India, is obvious. No greater need exists. No other department of medical service is of larger importance.\(^{135}\)

In this domain of medical education, co-operation between missions is working successfully at Vellore, and active steps are being taken to make the Miraj School a union one. This is most desirable, since otherwise it is difficult to provide the necessary staff, buildings, and equipment. Government requirements for the registration of medical practitioners call for high standards in these particulars that are not easily met by a single mission or by a small group of missions. Every mission in India that undertakes medical work for men should take this problem seriously to heart. At Ludhiana, the school for


\(^{134}\) \textit{Ibid.}, p. 118.

\(^{135}\) Goheen, R.H. \textit{op. cit.}, p. 126.
women is interdenominational, but it is not a union school. It has been affiliated with the Lahore Medical School, and has received large grants for buildings and maintenance from the Punjab Government. Should this relationship ever cease, co-operative mission support would probably be necessary to keep up this important school.\textsuperscript{136}

Miscellaneous Agencies

Without unduly prolonging this chapter adequate mention cannot be made of the training of village midwives, of the help given in the conduct of Baby Welfare Weeks, of the district touring, of the physical examinations of school children, of preventive inoculations for epidemic diseases, of the medical care of missionaries, by medical missions. These are not passed over because they are unimportant, but because they are mere incidents in the busy routine service.\textsuperscript{137}

In the realms of preventive medicine and of medical research very little has been done, and much should be done, by missions. The inadequacy of the staffing of mission hospitals accounts for the deficiency. This is regrettable, and the necessary remedy ought to be applied. A wider vision and a longer arm are wanted. May He whose resources are unlimited inspire His servants to undertake the larger service. Surely the time has come for a more enlightened and truer evaluation of this form of work. It is indeed, the medical work is “not merely a key to open the door into the non-Christian communities, but an integral part of the missionary enterprise”.\textsuperscript{138}

\textsuperscript{136} Chorn Oliver, B. \textit{op. cit.}, p. 107.
\textsuperscript{137} \textit{Ibid.}, pp.122-124.
\textsuperscript{138} \textit{Ibid.}, pp. 126-128.
Medical Missions

The Medical Missions had more than 450 years old history of medical services to the people of India. The role and the contribution of Christian Medical institutions may not be significant if we juxtapose them with the health needs of the entire country. And they may not be evenly distributed across the states. But these facts alone may not lead to the right way to judge the importance of the ‘Medical Missions’. There is one area in which Christians dominate in India, notwithstanding their small size and economic disabilities, and that is in the area of service institutions particularly in education and health. There is evidence to show that the Church has been an important institution providing health services from early times. Probably the first hospital in India was built by Catholics during the mid-sixteenth century. Various Protestant missionaries also provided remarkable services at a later date. They include Church Missionary Society, Church of Scotland Mission, Danish Lutheran Mission, Free Church of Scotland Mission, Leipzig Lutheran Mission, London Missionary Society, Society for Propagation of Gospel Wesleyan Missionary Society. Some American Societies like the Penysilvanian mission. American Baptist Mission, Canadian Baptist Mission, Lutheran Seventh Day Adventist Mission etc.

But the initiatives and effects of these missionary societies were sometimes not followed up. The socio-political changes in Europe, internal conflicts, as well as inter-

---

denominational struggles resulted in abandoning the good works done by earlier missionaries.  

Catholic Medical Care

It does not appear that the Jesuits sent out qualified doctors to act as medical missionaries, but it often happened that some of their missionaries possessed a serviceable knowledge of medicine which they used to good effect. Joseph Thekkedath gives us some insight into the nature of the earlier Jésuit efforts:

As early as the year 1550, Fr. Henriques set up a hospital for the benefit of the poor. Rodrigues Coutinho, the Portuguese captain of the Pearl Fishery coast at that time, was very helpful towards this project. The hospital was maintained by the alms of the Christians and the fines which were imposed on various offenders. Since the amount collected from alms and fines was not always enough for the upkeep of the hospital, Fr. Henriques ordered that a collection should be made once a week for the expense of the hospital.

Later, more hospitals were established on the Fishery coast. The money for the expenses was furnished by the Christians. At each pearl-fishing a contribution was made in proportion to the number of boats which took part in the fishing operations. This money was deposited with a reliable person who would later spend it in accordance with the instructions of the Jesuit Fathers. He had to keep an exact account of the amount spent. In years of scarcity, the Jesuits who looked after the administration, borrowed

---

141 Firth, C.B. pp. 205-206.
money from elsewhere for the upkeep of the hospitals, on the understanding that the
chiefs of the paravas would repay the loan at the next successful pearl fishing.\textsuperscript{143}

These hospitals took care not only of the Christians but also of the Hindus from
the interior parts of the country. When the members of the confraternity of charity met
together every week for their conference, two persons were chosen to serve the hospital
during that week. This method worked well.

Protestant Missionary Medical Care

With the arrival protestant medical missionaries ushered a new feature in
Christian work in India in general and Andhradesa in particular. No doubt attempts of a
non-professional kind was in practice from the beginning of 19\textsuperscript{th} century, it took a
concrete shape by the later part of 19\textsuperscript{th} century. This medical Ministry in course of time
has become boon to the sick and diseased and relieved the masses from their endless
suffering to a greater extent. The healing ministry in course of time achieved great
success and thus laid the foundation for modern medical science in India. It was in 1783,
that Dr. John Thomas\textsuperscript{144} came to India as a surgeon for ship crue in 1783 and later joined
English Baptist Missionary service as carrey’s colleague in 1793. He was very much
moved by the appaling condition of tropical diseases in the villages around Calcutta. He
also translated part of New Testament in Bengali. In course of time, the American Board
started sending medical missionaries to Indian subcontinent. The first in a long line of
missionaries who were sent to Indian subcontinent was John Scudder, who arrived to
Ceylon in 1819 and later to Madras (from Ceylon) in 1836.\textsuperscript{145} In 1851, his eldest, son

\textsuperscript{143} Ibid., p. 94.
\textsuperscript{144} John Mekenzie, The Christian Task in India, Punthi-Pustak, Calcutta, 1994, p. 133.
\textsuperscript{145} Ibid., p.135.
Henry Scudder, also a medical evangelist joined him. Henry was the first missionary to start Arcot medical mission with which his family has intimate contacts. Meanwhile from 1837 other medical evangelists were at work in Madura, where the American Board had begun its mission in 1834. The London Mission started medical work at Neyyoor in South Travancore by Mr. M.A. Ramsay, a layman in 1838 which in course of time became famous hospital in cobalt therapy for cancer.\textsuperscript{146} From 1840, the American Baptists had two medical evangelists working in southern Bengal. The first doctor came to Ludhiana in the Punjab in 1842.

After the sepoy's mutiny in 1857, the protestant Missions began to give more attention to medical work. The medical evangelists from (Scottish) United Presbyterian Mission such as Shoolbred and Valentine, started their work in 1860 in the villages of Rajasthan. They combined vaccinations and other medical treatments with the preaching of the Gospel. This led to the establishment of dispensaries, and then hospitals at Beawar, Ajmer etc. Similarly the Free Church of Scotland Mission between 1857 and 1903\textsuperscript{147} gradually established hospitals at all its principal stations. Similarly, the Basel Mission in 1885 set up hospitals on the west coast and in North Karnataka at Calicut, Betgeri and Udipi. The American Presbyterians developed an important medical centre at Miraj in 1889 in the western Deccan. In short during the second half of the nineteenth century medial work became a recognized branch of service in most of the mission centres and attained faster development. This is corroborated by the fact that there were only seven medical missionaries, in India; in 1882 there were 28; but in 1895 the number

\begin{footnotesize}
\textsuperscript{146} Firth, \textit{op. cit.}, p. 200.
\textsuperscript{147} Solman Doraiswamy, \textit{Christianity in India}, CLS, Madras, 1986, p. 201.
\end{footnotesize}
had risen to 140, and in 1905 to 280. The Indian Doctors are also increased during the period under consideration and as per the statistics there were 168 doctors in 1895.\footnote{Richter J. \textit{A History of Missions in India}, Oliphant, 1908, pp. 347 & 354.}

**WOMEN MEDICAL MISSIONARIES**

One particular reason that contributed for the growth of healing ministry was the lady missionaires and their helpers. They visited sick women in their homes and brought to light their special needs for medical aid. A further step was taken by American Methodists who sent out a fully qualified lady doctor, Clara Swain in 1870 to work at Bareilly in Uttar Pradesh where she opened a women’s hospital in 1874 on the land donated by the Nawab of Rampur.\footnote{Bareley, W.C. \textit{History of Methodist Missions}, London, ND, p. 507.} Another American lady doctor, Sara Seward, sent by the American Presbyterian Mission, arrived at Allahabad in 1871. The Church of England Zenana Mission has built hospitals for women and children in widely separated parts of India from Amritsar to Krishnagar and from Benares to Bangalore. The British Methodists took up medical work for women and children at Mysore and Hassan (1906).

Another contributory factor of Medical Missions was their work among the Muslims of North-west and in Kashmir. The medical mission of the C.M.S. established its hospital with the help of Dr. Elmslic at Srinagar in 1864 and in some other places in eastern and western Punjab and thus became one of the most notable societies in India. Other Missions that worked in that region, include those of the American Presbyterians and the Church of Scotland, which gave prominence to medical work and built hospitals, several of them for women and children.\footnote{Richter, \textit{op. cit.}, p. 352.}
The Rev. C. Leitch appointed in 1852, was the first medical missionary. At the opposite end of the land, Dr. Elmslie began work for the C.M.S. in Kashmir, then accessible by a trail and not by the road so easily traversed by motorcars to-day. The Moravians pushed on 24 miles further to Leh in Ladah, still only accessible by a trail, and their chief institution has been a hospital. A departure is to be noted in that not missionary societies but military officers started the Afghan Mission in Peshawar in 1853, captained by Sir Herbert Edwardes. The C.M.S. Hospital there now uses as its staff chaped the upper room of an old Moghul burj or tower, that carries the scars of many sieges. More recently, since 1889, have come into being the large medical centres of the interior-Miraj, Ludhiana and Vellore, all now conduct started to flourishing medical schools. The enormous clinic at Ranaghat in Bengal was started by a retired collector of the Indian Civil Service. It was later taken over by the Church Missionary Society. The solid buildings are gradually replaced by the original huts.

Since medical work requires trained doctors, nurses and compounders, all medical missions were obliged to make some arrangement for training Indian assistants. As a first step, this was done by individual missionaries, who formed classes of the available people, generally Christians from mission orphanages and boarding schools, and taught them as best they could in their own hospitals. Some excellent work was done in this way, with regard to the nurses and compounders; but need was felt for the trained doctors, as the government insisted certain academic standards for medical practitioners. Consequently, Christian medical schools were formed in certain centres, to train doctors.
in the prescribed standards of government examinations. The first effort in the direction was the Agra Medical Mission Training Institute, begun in 1881 by Dr. Valentine of the United Presbyterian Mission. A more ambitious project was the North India School of Medicine for Christian Women, founded by Dr. Edith Brown and Miss Greenfield in 1894, a fully fledged medical school for women doctors, compounders and nurses, which became affiliated to the Punjab University. In the Deccan a Christian medical school was established at Miraj under Dr. (afterwards Sir) William Wanless, which for nearly fifty years was the principal training school for men. In South India, a medical school for women was founded at Vellore under Dr. Ida S. Scudder of the American Arcot Mission. This in course of time became a union institution with the cooperation of ten other missions. All these Bachelor of Medicine (M.B.) training institutes were upgraded as M.B.B.S. institutes after they introduced Bachelor of Surgery (B.S.) courses in due course as per the Government institution.

In the early days, the nursing was universally regarded as menial work and hence, the parents did not prefer to send their children for nursing. Hence, for many years Anglo-Indians and Indian Christians provided almost all candidates for the entire nursing profession in India. During the beginning of the Second World War it was estimated that about ninety per cent of all the nurses in the country, male and female, were Christians, and that about eighty per cent of these had been trained in mission hospitals. Thus the Christian medical missions led the way in this important matter, and even to date, it still

153 Firth, C.B. *op. cit.*, p. 207.
156 Firth, *op. cit.*, p. 208.
seems to be the fact that Christian hospitals usually make better provision for nursing their patients than government hospitals.

**Tuberculosis Sanatoriums**

The premier tuberculosis sanatorium in India was started by the Union Mission Tuberculosis Sanatorium, Arogyavaram, near the southern border of Andhra Pradesh. Founded in 1915 as a co-operative venture shared by fourteen missions, it rapidly achieved a leading position both in treatment and research. The first Superintendent was Dr. C. Frimmet Moeller of the Danish Mission, and his successor was Dr. P.V. Benjamin. Besides Arogyavaram there are eleven other sanitariums functioning in different parts of India including the Visranthipuram Tuberculosis sanatorium at Rajahmundry in the area of present study.  

**LEPER ASYLUMS**

Ever since William Carey among his other activities was instrumental in founding an asylum for lepers in Calcutta, the care of those suffering from leprosy has been a special field of Christian service. At first, it was a question of providing a refuge for advanced cases, where the patients might be housed and made a little more comfortable. Many such leper homes were founded in the nineteenth century, some of them by individuals (missionaries or others) moved to compassion by the plight of the lepers, others by missions as such. Quite often the founders were not medical men. One such was Wellesley Bailey, a layman who laid foundation for the Mission to Lepers, an international and interdenominational society entirely devoted to providing and


maintaining homes for sufferers from this disease. Most of the leper settlements in India are maintained either under its own auspices or with the help of its grants-in-aid. At the present time, it has 26 institutions of its own in this country including Ramachandrapuram, Vijayanagaram and Salur leper homes in Northern Coastal Andhra and assists some 34 other homes and clinics. These leper asylums besides providing food, shelter and medical attention, have large farms and dairies worked by the patients and carry out well organized programmes of occupational therapy and educational and social activities. Besides these, the deformities are being corrected in these hospitals through physiotherapy and reconstructive surgery. In all this work, Christian missions have played, and are still playing, a leading role.¹⁵⁹

A recent development since the Second World War has been the initiation of Christian institutions for the treatment of mental illness, the need for which had long been felt. Psychiatric clinics at Lucknow, Miraj and Vellore have made a beginning in this work.¹⁶⁰

The Missionaries were the first people to save the life and give redress to the people who were in distress. Even though the early converts to Christianity in India were depressed communities, they never lacked the spirit of service to the people of other castes who appreciated them for their medical service but they never obliged to come into the Christian religion. The Missionaries left them to their own choice between choosing Christianity or not. Of course, it was the strong missionary principle that their business was to preach the gospel and leave the result to God. The Missionaries recognised the

¹⁶⁰ Firth, op. cit., p. 209.
total curses of famine and epidemics destined to Indian people in addition to their poverty and illiteracy. They wanted to give organised medical care in the hospital for various diseases and systematized personal involvement in the medical relief during the disastrous epidemics. Even when their own people feared to approach the epidemic patients, the Missionaries and their staff approached them personally and treated them whole-heartedly. Many patients on the verge of death and hopelessness were miraculously cured. Many people who came to the hospital half-dead left the hospitals with smiling faces. They valued the Christian service and the medicines more than the native medical services and even the government medical outfits.

Thus, it may be noted that Christian medical contribution to India in general and coastal Andhra in particular is all the more praiseworthy when viewed from the background described at the recent Science Congress: "India has 42,000 doctors; it should be ten times that number. The few doctors nearly all settle in the towns and disdain the villages. The level reached by the best medical colleges in India is that reached by the lower ranking medical colleges in the United States. . . . The hankering after private practice by the teaching staff has been mainly responsible for the low educational standards in some institutions". 161