CHAPTER I
INTRODUCTION

The emergence of social history of medicine as a field of historical inquiry can be traced back to the founding of the Society for the Social History of Medicine in 1970 in Great Britain. Today, with the development of Preventive and Social Medicine as a new branch of medicine and new social history as an important field of social science research, the social history of medicine has attained new dimensions. No wonder research in the social history of medicine covers a wide range of subjects which include not only aspects of health disease and medical care but also attitudes to illness, medical thought and treatment, systems of medical care, the cultural roots of medicine, epidemic diseases and mortality, public health policy, etc. The concept of public health evolved in Great Britain in the eighteenth century as a consequence of the impact of the industrial revolution and its attendant problems – slums, accumulation of refuse and human excreta, overcrowding and a variety of social problems. Frequent outbreaks of cholera, Chadwick’s 1842 Report, which highlighted the pitiable sanitary conditions of the labouring population, the realization that filth and garbage are the greatest enemies of humankind and the resultant sanitary awakening brought forth the Public Health Act of 1848 in England. By the time the more comprehensive Public Health Act 1875 came to be passed it was in acceptance of the principle that the state is responsible for the health of the people.¹

Public health in the nineteenth century was primarily concerned with sanitary regulations and organisation of medical relief during outbreak of epidemic diseases. However, during the early decades of the twentieth century it included a lot more than

mere sanitary measures. C.E.A. Winslow, Yale University Professor (1915–45), a pioneering scientist and philosopher of public health, described it as the science and art of disease prevention, prolonging life, and promoting health and well-being through organised community effort for the sanitation of the environment, the control of communicable infections, the organisation of medical and nursing services for the early diagnosis and prevention of disease, the education of the individual in personal health and the development of the social machinery to assure everyone a standard of living adequate for the maintenance or improvement of health. Public health involved professional work by different disciplines: physicians diagnosed diseases; sanitary engineers constructed water and sewerage systems; epidemiologists traced the sources of disease outbreaks and their modes of transmission; statisticians provided quantitative measures of births and deaths; nurses provided care and advice to the sick in their home; sanitary inspectors enforced compliance with public health ordinances; and administrators tied to organise everyone, debated budgetary allocations and got sanitary regulations codified. Public health made rapid strides with the advances achieved in microbiology, another important branch of medicine, making bacteriologists and virologists an integral part of Preventive and Social Medicine.

Robert Koch’s discovery of the Vibrio cholerae as the micro organism that causes cholera during his research in Alexandria (1883) and his confirmation of the same one year later in Calcutta was a land mark in the history of medicine and public health. It took some time for the Western medical tradition to accept the radical ideas of Robert Koch and for the medical professionals to include them in their

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3 Sheldon Watts considers it as the beginning of modern medicine. Epidemics and History: Disease, Power and Imperialism (London: Yale University Press, 1999), xii.
therapeutics. This period of transition from 1880s to 1930s also coincided with European and North American imperialism. The evolution of an imperial policy of public health and medicine in British India can be located during this period of transition. The present work entitled “Coping with Diseases: Public Health and Medicine in Colonial South India 1883–1925”, deals with three important aspects, namely, disease, public health and medicine in Colonial South India in the late nineteenth and early twentieth centuries. It examines the British medical policy and public health measures towards combating epidemic diseases in South India and the Indian responses to these during the span of a little more than four decades. The present work has undertaken a study of smallpox and cholera for understanding the efforts of the British as well as the indigenous society to combat epidemics, keeping the motives for such efforts and the political controversies they aroused to the margins.

**Historiography of Disease, Public Health, and Medicine**

The historiography of disease, health, and medicine has expanded in recent years. There is a shift in the existing perspectives that held sway for decades when medicine was depicted as the conquest of diseases independent of the social and political contexts. The triad of disease, health, and medicine has been studied from many angles, in the context of Colonial India examining different issues like medical imperatives of imperialism, marginalisation of the indigenous medical systems, and

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4 Watts, Epidemics and History, xiii.
5 Mark Harrison, Public Health in British India: Anglo-Indian Preventive Medicine, 1859–1914 (New Delhi: Cambridge University Press, 1994).
gender and medicine, the indigenous reaction to public health initiatives, medical politics etc. There has also been acute focus on specific epidemic diseases like smallpox, cholera, plague, venereal disease, malaria, leprosy etc. The argument most often made about Colonial medical historiography was that Western medicine was a handmaid of imperialism strategically deployed for the cause of perpetuating the white man’s domination over their subjects. As a consequence the diseases that threatened the imperial interests alone attracted vigorous state action against dangerous diseases.


11 Anil Kumar states that when the British “catapulted” to power in India trimmed shaped and conducted the growth of Western medical science to attend, promptly and appropriately, to the callings of the Empire. Anil Kumar, Medicine and the Raj: British Medical Policy in India 1835–1911 (New Delhi: Sage Publications, 1998), 17. Radhika Ramesubban identified the priorities of Colonial medical establishment as maintaining the fitness of the army, European officials’ and European health, with indigenous peoples’ health in the last. Radhika Ramesubban, “Imperial Health in British India 1857–1900”, in Disease, Medicine and Empire: Perspectives on Western Medicine and Experience of European Expansion, ed. R. Porter and M. Lewis (London: Routledge, 1988); David Arnold concludes that “Western medicine enjoyed an intimate relationship with Colonial power. Its first priority was the
With respect to the British policy on public health, both Indian and Western scholars have contributed. Radhika Ramasubban in her analytical piece on Public health and Medical Research in India (1982) has traced the evolution of public health and medical research in India under the Colonial rule. But she has not studied the impact in a greater detail. This was done by David Arnold through his volume on Imperial Medicine and Indigenous Societies (1988). His later work Colonizing the Body (1993) traces the principal stages of the emerging public health policy. He utilises the history of epidemics and medical intervention to uncover the different forms of Indian responses. Mark Harrison in his Public Health in British India: Anglo Indian Preventive Medicine 1850–1914 (1994) has explored the social and political significance of the development of public health in India and argues that preventive medicine was less central to the consolidation of imperial rule in India. Also he asserts the sincere commitment of the government to public health reforms. Roger Jeffery in The Politics of Health in India (1998) argues that in spite of many health reforms that were carried out, public health was a qualified failure with the European areas alone enjoying the benefits of civic concern. Chittabrata Palit and Achintya Kumar Dutta in their edited volume History of Medicine in India: The Medical Encounter (2005) have dealt with the medical encounter between the Eastern and Western medicine by examining several issues connected to epidemics, public health and traditional medicine. Biswamoy Pati and Mark Harrison in the recent book

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12 Radhika Ramasubban, Public Health and Medical Research in India: Their Origins and Development under the Impact of British Colonial Policy (Stockholm: SAREC, 1982).
on The Social History of Health and Medicine in Colonial India (2009) have focussed upon public health in India as one of the diverse facets of the social history of health and medicine. Muhammad Umair Mushtaq’s article on Public Health in British India: A Brief Account of the History of Medical Services and Disease Prevention in Colonial India (2009) reveals the establishment of health systems under the Colonial power and the response to epidemics in British India. With respect to the regional focus, Poonam Bala’s Imperialism and Medicine in Bengal: A Socio-Historical Perspective (1991) explores the different trends in the medical policies of the Colonial state and assesses their impact on medicine in nineteenth and early twentieth century Bengal. Kabita Ray in her History of Public Health: Colonial Bengal (1998) has studied the Colonial health policies and the Indian reactions to them from 1921 to 1947. Mridula Ramanna’s Western Medicine and Public Health in Colonial Bombay (2002) has analysed the British medical policy and the Indian reactions to Western medicine in nineteenth century Bombay.

The writings on medical history of Colonial South India during the late nineteenth and early twentieth centuries are comparatively few. V.R. Muraleedharan’s ‘Professionalizing Medical Practice in Colonial South India’ (1992) discusses the role of licentiates of medicine in the Colonial health care policy in Colonial South during the interwar years. Muraleedharan and Veeraraghavan in their article ‘Anti-

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towards better public health. But he has not studied in detail the impact of these public health measures and the Indian response to it. Moreover, the narrative portion of the thesis is drawn from the experience of the Madras city alone and not the Madras presidency as a whole.²⁷

Scope of the Present Thesis

The above historiographic survey shows that there is a need for a comprehensive study of the medical policy of the British towards disease control in Colonial South India and assess the indigenous response to it. For the purpose of the present study the term colonial South India corresponds with the area included in the Madras presidency. It excludes the princely states of Mysore, Travancore, Cochin, Pudukottai, and the two minor states of Banganapalle and Sandur. Further, the study of Ayurveda alone is included as it was resorted to by the majority of the population. Colonial South India has been selected as the study area for two important reasons. It was in Colonial South that the first hospital in India (Madras General Hospital) was established in 1664. Moreover it remained as one of the major centres (King Institute of Preventive Medicine) for the bacteriological investigations of epidemic diseases in India. The period selected for study, namely, 1883–1925 was marked by a growing anxiety about the increasing mortality from epidemic diseases. The year 1883 denotes the path-breaking discovery of Vibrio cholerae, the micro organism responsible for cholera which proved to be a major turning point in the understanding and conquest of epidemic diseases. The year 1925 is significant for the formation of the School of Indian Medicine in Madras in response to the demands for the encouragement of the indigenous systems of medicine.

In Colonial South India, the control and prevention of epidemic diseases was given serious attention during the later part of the nineteenth century. By the different public health measures, the exceptionally high mortality rate was considerably reduced by the early twentieth century. However, the scenario was different in rural areas of Colonial South India where mortality continued to remain high. The hypotheses for this disparity in mortality includes the absence of sufficient medical institutions in rural areas, lack of interest of public health officials in implementing the health measures and the refusal of the people to resort to medical treatments due to cultural prejudices. Ultimately, the inadequacy of the Western medical relief had an impact on the British medical policy in incorporating measures for the improvement of the indigenous systems of medicine.

Objectives and Methodology

The objectives of the present work are: i) To explore the role of indigenous and Western medical practices in providing medical relief; ii) To analyse the policy of the Madras government in combating the epidemics of smallpox and cholera; iii) To identify the effects of improved sanitation on the control of epidemic diseases; iv) To explore the governmental initiatives towards encouraging indigenous systems of medicine; and v) To trace the impact of measures to train women in modern methods of midwifery. The study has adopted a descriptive and interpretative methodology. In addition, historical narration and critical evaluation are used.

Historical Sources Consulted

For this study a large number of primary sources have been consulted. The Proceedings of Government of India from the National Archives of India, particularly
the files of Home Department Public Branch, Medical Branch, and Sanitary Branch have been used. The Proceedings of the Government of Madras from the Tamilnadu State Archives including the files of the Public Department, Local and Municipal Department, Local Self Government (Medical and Public Health Departments) have been consulted. Further the publications and reports from the National Medical Library in New Delhi have been used. The prominent contemporary medical books and journals including those published in English, Tamil and Telugu have been consulted at the rare books section at the Connemara Public Library and Roja Muthaiah Research Libraries in Chennai. In addition, Government Orders from various departments of Government of Madras, Reports on Vaccination in the Madras Presidency, Reports of the Sanitary Commissioner of Madras, Contemporary Newspapers, Madras Municipality Proceedings, Reports of the Civil Hospitals and Dispensaries in Madras from the Tamilnadu State Archives Library have been accessed. The secondary sources for the study were chiefly consulted from the Libraries of the Pondicherry University, Institut Français de Pondichéry at Pondicherry, the Nehru Memorial Museum and Library and Jawaharlal Nehru University Library at New Delhi and various other academic and public libraries of India. Some primary sources have been accessed through the internet as in the case of the online resources of the National Library of Scotland.

Chapterisation

Chapter 1 which forms the Introduction traces the acquaintance of the early Indian society with different diseases and their treatment aspects since the Vedic period. Medicine which was purely magico- religious during the period slowly made a transition towards rational treatment after the fifth century B.C. During the Buddhist period, the influence of Indian medicine spread far and wide and by 1200 A.D, Public
health had come to be developed well in India. With the arrival of the Portuguese and later the Dutch, the European sailors and soldiers were frequently affected by different diseases and they turned to local practitioners for relief. The English East India Company, since its beginning, provided surgeons on their merchant ships and a medical officer to look after each factory. By the seventeenth century the English East India Company established hospitals to cater to the needs of British soldiers. It was only by the late nineteenth century, that the British realised the need for public health. The chapter traces the beginnings of disease and medicine in South India from the Vedic period to the nineteenth century.

Chapter 2 entitled “Medical practices in Colonial South India: An Overview” examines the different indigenous medical practices that were prevalent in Colonial South India. The indigenous medical practices believed in the balanced humours or *doṣhās* in the human body as the means of preservation of health. The indigenous medical practices which were centuries old had a long acquaintance with various diseases and were fluent in the treatment aspects. By the late nineteenth century, they catered to the medical needs of the majority of the population and were very popular due to their efficacy and cheapness. In this scenario, the Western medical practices though alien to the people attracted considerable numbers of population. The British were very confident of the capability of Western medicine in treating diseases. The chapter explores the extent to which it made inroads into the society through the medical institutions. What was the scope of the Western hospitals and dispensaries as against the indigenous medical practices in providing medical care? What was the point of contact between the indigenous and Western medicine systems of medicine with regard to combating the diseases in the nineteenth century and in what manner the presence of Western medical practices affected the indigenous medical practices
in Colonial South India? Whether any particular medical practice dominated or was there a co-existence of different medical practices in the South in the late nineteenth century? This could be gauged from the number of medical institutions, the attendance of patients, the diseases treated, the classes, sexes, and ages of the patients resorting to relief, the operations performed, the finances spent on patients attending the hospitals for treatment of various diseases, the numbers treated, and gender wise classification of patients all of which have been discussed.

Chapter 3 entitled “Prevention and Control of Epidemics: A Study of Smallpox and Cholera” is divided into two sections. The first sections deals with the medical arrangements that were made to cope with the epidemic of smallpox and the second deals with cholera. There are both indigenous views and Western theories about the outbreak of these epidemics. With regard to smallpox control measures, even though vaccination was well established by the late nineteenth century, the mortality from it continued to remain high. In order to prevent this, rigorous control measures were implemented by the Madras government in the form of compulsory vaccination and revaccination. The drawbacks met with the use of human-lymph vaccine accelerated experiments with animal-lymph based vaccination and trials on their preservation. With regard to cholera prevention, the government initiated all possible measures to stop the interference of the disease with trade and commerce. The sanitary control of fairs and festivals, conservation of water supplies, and experiments with anti-cholera inoculation received equal attention. The chapter gives special attention to the campaigns of the public health authorities in combating epidemics in the rural areas of South India and the Indian response.
Chapter 4 entitled “Measures at Improving Sanitation” examines the various sanitary measures that were undertaken to prevent the spread of epidemics. Sanitation primarily focused on the expansion of vaccination, the improvement of water supply and drainage, improvements of village sites, conservancy of towns and villages, and improvements in the registration of vital statistics. The efforts to improve sanitation had a direct relation to the prevention of epidemics, particularly cholera. The chapter also throws light on the sanitary legislations imposed towards this end and the Indian response.

Chapter 5 entitled “Encouraging Indigenous Medicine” discusses the measures taken to improve and encourage the indigenous systems of medicine. The medical relief provided by the government did not reach the rural population and hence they largely resorted to the native practitioners. A number of these indigenous practitioners were not educated in any system of medicine but acquired knowledge through heredity and among them, large number of quacks also practiced. In order to reduce the quack practices and have in their place duly qualified practitioners on whom majority of the population depended, a number of resolutions were brought before the government. Though in the beginning, the government expressed its inability to accept them due to financial constraint, a few committees were appointed to report on the value of indigenous drugs of India. The chapter analyses the outcome of the reports and the steps taken to popularise indigenous medicine. The role of vernacular newspapers in making a case for the indigenous systems of medicine is also discussed.

Chapter 6 entitled “Women and Public Health” is about the medical policy and public health measures of the British for women in Colonial South India. The chapter examines the impact of training women in different skills of maternity in order to do
away with the indigenous practice of midwifery. The conduct of labour depended
upon the indigenous midwives or the dhāi. The number of serious cases mishandled
by them led to extremely high mortality of mothers during childbirth. This led the
public health authorities to create state run health centers for women. In order to do
away with the indigenous midwifery, the government of Madras initiated the training
of women in Western skills of maternity. The chapter analyses the effect of the
introduction of Western ideas and practices in maternal health care and the attitude of
the indigenous midwives towards these modern concepts. The role of missionaries
and voluntary organisations in improving the conditions of childbirth are also
discussed. The findings of the present research are included in the conclusion which
forms chapter 7.

*Medicine in Pre Colonial India*

The tradition of medical treatment of diseases in human society is as old as the
creation of the human body. Although primitive men invented the primary method of
alleviation of different sorts of maladies by virtue of their basic instinct and imitating
some animals they, nevertheless, had to conduct exclusive experiment and research
for a long period in order to formulate a scientific mode of treatment. By this process,
in each and every civilisation, some definite systems of treatment were formed of
which traditional medicine of India may be considered as the oldest and foremost.
Simple ideas related to disease and healing can be found in abundance in the corpus
of religious hymns called the Vedas, composed originally in an old form of Sanskrit
during the early to mid-second millennium B.C. Fevers, typhoid, diarrhoea, dysentery,
jaundice, heart disease, dropsy, bronchitis, pneumonia, tuberculosis, cancer, eye and
skin related diseases found a mention in these texts.\textsuperscript{28} Along with these, the epidemics like cholera also found prominence. Healing practices consisted of imprecations against demons and enemies through elaborate rituals, charms, amulets, incantations for expelling diseases.\textsuperscript{29}

Between the fifth century B.C. and the fifth century A.D. the medical practice came to be codified into Ayurveda, -‘the science of life’. It made a transition from the association of religion and magic to a more rational and scientific method of treatment. The basic doctrines came down through two schools; Charaka of Kashmir, primarily concerned with internal medicine, and Sushruta of Benaras, primarily concerned with surgery. The great classics of medicine the \textit{Charaka samhita} and the \textit{Sushruta samhita} came into being. Diseases were considered as the disturbance of the fundamental equilibrium of the three bodily elements: air, phlegm, and bile. They were also explained in terms of religious beliefs of the Hindus, especially the transmigration of the soul. However, the diagnosis methods were highly developed. All five senses were used for diagnosis. Classification of diseases was very elaborate. Sushruta mentions not less than 1,120 diseases. Therapeutics was based largely on hygiene and diet both of great importance. There were high standards of training and practice of surgery, where a wide range of operations was performed, using many skillfully made instruments.\textsuperscript{30}

However, during the Buddhist period, Indian surgery received a setback and gradually declined. Indian medicine extended its influence and its physicians were

\textsuperscript{29} Poonam Bala, \textit{Medicine and Medical Policies in India: Social and Historical Perspectives} (Lanham: Lexington Books, 2007), 13.
\textsuperscript{30} Sushruta elaborately describes 121 surgical instruments including Catheters, Syringes and Speculums, along with detailed instructions for handling them. He also gives a description of the operation theater and the preliminary preparation of the surgeon before operation. B.K. Sarkar, \textit{Hindu Achievements in Exact Science. A study in the History of scientific Development} (London: Longmans, Green, 1918), 54.
held in great honour. They cured diseases by diet rather than by medicinal remedies. Not only the practice of medicine, but the concept of public health had developed by the early centuries of Christian era. Fa-hien, (C. 398–414 A.D.) a Chinese traveller who visited India during the times of Chandragupta, provides us details about the charitable dispensaries in Pataliputra. The physicians inspected the diseases and according to the cases ordered food and drink, medicines and decoctions that contributed to their ease. Hiuen Tsang (C.629–645 A.D.), a Chinese pilgrim contemporary to the emperor Harsha, also provides a description about the hospitals of that time.

With the rise of tantrism, which dominated the Indian scene between AD 700 and 1300, various complicated processes were developed to purify the metals and combine them with medicinal plants. The early medicinal use of metals is associated with the Siddha system of medicine, which was one of the oldest systems of medicine in South India. At the same time, there was an exchange of medical knowledge between Indians and Arabs along the Malabar Coast by which Indian ideas were translated and incorporated into Arabic texts. In the Deccan, dispensaries and hospitals were established under the Pallava and Chola rulers between 574 A.D and 1200 A.D. There are epigraphical evidences of the existence of dispensaries and hospitals under the Pallava and Chola rulers between 574 A.D and 1200 A.D. There

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31 D.V.S. Reddy, “Medical Education in Ancient India”, The Antiseptic 33, January–December 1936, 78. Fa-hien narrates how the nobles and householders of this country founded hospitals within the city to which the destitute of all countries, the poor, the crippled and the diseased may come. Here, these people were treated freely and provided with every kind of help. After inspecting their diseases the physicians treated them with all their efforts and when cured, they depart at their convenience.

32 Reddy, “Medical Education”, 78. According to Hiuen-Tsang, in all the highways of the towns and the villages throughout India there were ‘hospices’ (पुण्या-सङ्क). These hospices were provided with food and drink as well as physicians with medicines that provide medical facilities to the travellers and poor people. These institutions that helped the poor and the needy people were also known by several other names such as punyasthanas, punasaṅgas, dharmaśālas, viharas and matha. These were the Indian counterparts of the Western almshouses, monasteries and infirmaries of those times.

are inscription which furnish detailed information regarding the upkeep of the hospital, the medicines stocked therein, the number of beds provided for in-patients, the endowments of staff nurses, physicians or surgeons, compounders and others who attended to the needs of the patients. Named in Tamil as the atulasalai or vaidyasalai, the hospital was manned by a physician given to hereditary practice of medicine.\(^{34}\)

From the twelfth century A.D to the fifteenth century, due to the domination of the Muslim rulers, Hindu science languished. This was true of medicine also. The Muslims gave support to their own system of medicine, the Unani tibb. It was practiced mainly in the cities and in the courts and palaces, whereas Ayurveda was practiced mainly in the country side and among the poor. Under the Tuglaq dynasty, there existed 70 hospitals in Delhi alone and 1200 physicians enrolled as state employees.\(^{35}\) From the sixteenth century, in the Mughal period, well organised hospital were established with free treatment for the people. Hospitals were established in big cities and competent Hindu and Muslim physicians were appointed.\(^{36}\) About the same time, the medical system in India started to witness the influence of European medicine, primarily transmitted by traders and travelers.

The Portuguese were first to arrive in India. By 1510 they established themselves on the West coast, with their capital at Goa. There was a high incidence of diseases and mortality among them. Diseases like cholera, smallpox, influenza and various 'fevers', such as malaria and typhoid had their toll among the Portuguese. About three-

\(^{34}\) S.Gurumurthy, Medical Science and Dispensaries in Ancient South India as gleaned from Epigraphy, Indian Journal of History of Science [hereafter IJHS] 5, no. 1, 76. Another Chola inscription of the year 1120 A.D mentions of a matha attached to the temple of Tiruvaduturaiyudaiyar at Tiruvaduturai. Here, the students were taught Astanga Hridaya of Vagbhatta and Charaka samhita. A later inscription dated 1262 A.D, from Malakapur in Andhra, contains references of medical interest. It is said that Kakatiya queen Rudramma and her father Ganapati donated several villages to the South of river Krishna to vishweshwara. The income arising from these holdings were divided into three parts: Vishweshwara earmarked one third of it for a maternity home, one-third for a hospital and the remaining for a school.

\(^{35}\) Tazimuddin Siddiqi, “Unani Medicine in India during the Delhi Sultanate”, IHR 15, no. 1, 1980, 22.

quarters of deaths were in fact caused by ailments, such as tuberculosis, dysentery and infantile diarrhoea.\textsuperscript{37} With no knowledge of the tropical diseases, the Portuguese turned to local practitioners for knowledge of the local diseases and of indigenous drugs.\textsuperscript{38} Slowly, they modified their methods of treatment like bleeding, purging and excessive use of mercury incorporating by the Indian methods starving and following the Indian diet.\textsuperscript{39} The Portuguese were followed in 1595 by the Dutch who made a comprehensive study of the tropical conditions and tropical diseases.\textsuperscript{40}

The English East India Company set up its first trading post in India in 1608. The early sailors and soldiers landing at Fort St. George frequently suffered from virulent diseases like scurvy, dysentery, and fever. The East India Company provided necessary medical aid to the company’s servants.\textsuperscript{41} From the year 1612, when the company started its factories in India each factory was provided with a medical officer to look after the staff. There were three grades of medical men according to the importance of the ship or the factory. The highest type, the trained chirurgeon was available only at certain important localities. At the smaller factories, an apothecary was deemed a sufficient provision. Thirdly, there were the ordinary types of men available on small ships and at lesser factories, the ‘surgeons mates’ in whose hands were left the health of the sailors and factory officials. The early English trading posts were usually short of surgeons who died as often as patients, and it took more than a year before a replacement could arrive from Europe. This shortage led to employment

\textsuperscript{37} Norman G. Owen, ed. Death and Disease in Southeast Asia: Explorations in Social, Medical and Demographic History, ed. (Singapore: Oxford University Press, 1987), 4–12.
\textsuperscript{39} H.H.Goodeve, “A Sketch of the Progress of European Medicine in the East”, Quarterly Journal of the Calcutta Medical and Physical Society 2, 1837, 133–149.
\textsuperscript{40} T.J.S. Patterson, “The relationship of Indian and European practitioners of medicine from the Sixteenth Century” in Studies on Indian Medical History, ed. G.J.Meulenbeld and D. Wujastyk (Delhi: Motilal Banarsidass, 2001), 113.
\textsuperscript{41} Since the early years of the East India Company, two surgeons and a barber constituted the medical staff of every ship sent out by the company. D.V.S. Reddy, The Beginnings of Modern Medicine in Madras (Calcutta: Thaker, Sprink & Company, 1947), 1.
of Indian physicians, and this became the official policy for the East India Company in the first half of the seventeenth century since it was considered that Indian diseases were treated best with Indian remedies. 42

Beginnings of Public Health in Colonial South India

The earliest settlement of the English East India Company on the Coromandal Coast was started in 1611 at Masulipatam, then the chief port of the kingdom of Golconda. The English built there a factory house (ware houses, offices and residential accommodation). Later due to the exactions of Golconda, the English sought a footing in the Southern districts and obtained a grant of a piece of ground at Armegaon (in Nellore district) where they built a Fort and factory in 1626. Due to the difficulties with the local naik, in July 1639, Francis Day, the chief at Armagon, was authorised to sail down the coast and negotiate with the Rajah of Chandragiri for a new settlement. This search led to the selection by Mr. Day of the site, adjoining Madraspatam. He later obtained from the naik Damerla Venkatadri, “Lord General of the Carnatic”, a grant of territory and privileges and license to build a Fort and form a settlement. On 3rd September 1639, Day handed over to the Agent at Masulipatam, a report of this transaction, along with the firman granted by the naik. Though there was some delay in getting the approval for this new venture, finally, in February 1640, Cogan and Day dismantled the fort at Armegaon and founded the settlement of Fort St. George or Madras. 43

Colonial South India comprised the Southern and Eastern portions of the peninsula of India. It lay between the 8th and 22nd degrees of North latitude, and the

42 Iris Bruijn, Ship's Surgeons of the Dutch East India Company: Commerce and the Progress of Medicine in the Eighteenth Century (Amsterdam: Amsterdam University Press, 2009), 55.
75th and 85th degrees of East longitude, and the 75th and 85th degrees of East longitude. Its greatest length and breadth were respectively, about 800 and 450 miles forming an area computed at 290,000 square miles. The territory included within the Presidency of Fort Saint George, or what is better known as the Madras Presidency, occupied a considerable area of the peninsula of India. The coast line extended on the East of the peninsula from Orissa, in Bengal, to Cape Comorin. On the West the narrow strip of country, which included the native States of Travancore and Cochin, formed the coast line from Cape Comorin to the town of Cochin, where Madras territory again extended along the coast until its junction with the Bombay Presidency at the Northern extremity of the South Canara District. In the centre of the peninsula lay the Nagpore country and Berar, the territories of the Nizam, known generally as the Deccan, and the province of Mysore; but all the other regions of the peninsula, South and East of Mysore, belonged to the Madras Presidency. Excluding the native states, the Presidency occupied an area of 139,698 square miles of area.44

The different territories which constituted Colonial South India were acquired by the British at various dates. In 1763 the tract encircling Madras city, then known as the Jâgîr and later as Chingleput district, was ceded by the Nawab of Arcot. In 1765 the Northern Circars, out of which the French had been driven, were granted to the British East India Company by the Mughal emperor, but at the price of an annual tribute of 90,000 to the Nizam of Hyderabad. Full rights of dominion were not acquired till 1823, when the tribute was commuted for a lump payment. In 1792, Tipu Sultan of Mysore was compelled to cede the Baramahal (later part of present Salem district), Malabar and Dindigul subdivision of Madurai. In 1799, after the defeat of

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44 Within it was included 1,380 square miles belonging to the Puducottah territory, which is situated in the middle of one of the Revenue districts. C.D. MacLean, Standing Information Regarding the Official Administration of the Madras Presidency in Each Department, In Illustration of the Yearly Administrative Reports (Madras: Government Press, 1877), 1.
Tipu Sultan, Coimbatore and Canara were appropriated from Mysore; in the same year the Maratha Rajah of Thanjavur (Tanjore) gave up the administration of his territory, though his descendant retained titular rank till 1855. In 1800 Bellary and Cuddapah were made over by the Nizam of Hyderabad to defray the expense of an increased subsidiary force. In the following year the dominions of the Nawab of Arcot, extending along the East coast almost continuously from Nellore to Tirunelveli, were given up into the hands of the British by a puppet who had been put upon the throne for the purpose. The last titular Nawab of Arcot died in 1855; but his representative continued to bear the title of prince of Arcot, and was recognised as the first native nobleman in Madras. In 1839 the Nawab of Kurnool was deposed for misgovernment and suspicion of treason, and therefore his territories annexed. In 1862 the district of Canara was split in two, and North Canara was transferred to Madras Presidency (Map. 1.1)

The expansion of the British territories in South India occurred in a climate that proved antagonistic to the Europeans’ health, the British being no exception to it. Many diseases which took a mild form in England did take a very serious course and often proved fatal to the sufferer, owing to the severity of the climate here. Besides this, there were a set of new diseases to which the Europeans destined to get exposed here which they could never have got affected in their own countries. In addition, exposure to the heat of sun; the effects of scorching winds during certain parts of the years, and heavy dews by night, at other seasons; badly ventilated state of the barracks and the guard rooms; and, the intemperate habits of the men led to the general derangement of health in the form of fevers, dysentery, scurvy, beriberi, fluxes,
cholera, and hepatitis. The anxiety on the part of the English East India Company to safeguard the health and lives of its employees led to the foundation of the first hospital at Madras in 1664. Organised and staffed by British surgeons, it was meant exclusively for the benefit of British soldiers. In about two decades, the British also began their first experiments in public health in Madras by appointing Surveyors in 1688 to make arrangements for the maintenance and upkeep of sanitation in the city.

Diseases and Mortality in Colonial South India

By the end of the eighteenth century, South India became a prominent part of the British Empire in India. Madras, the capital of Colonial South India, developed into an important economic centre by facilitating the export of ready-made cloth to the European market, and thereby attracting more number of people. It was during this period that epidemics threatened British commerce and profits in the South. The epidemics of cholera and smallpox carried off more troops than all the diseases combined. At the first census of Colonial South India taken in 1822, the population was returned at 1,34,76,923. The next enumeration, within the same territorial limits, was in the year 1836–37, when the numbers were returned at 1,39,67,395 showing an increase of only 4,90,472 in fourteen years. The high mortality among the Europeans along with the civilian population stimulated the medical officers of the army to investigate the causes of the diseases and to implement measures to control the epidemics. Though a few preventive measures like inoculation and vaccination were introduced in the early nineteenth century, these were primarily aimed at

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48 C.D. Maclean, Standing Information, 327.
safeguarding the British soldiers and the European population. During the nineteenth century, diseases including cholera, smallpox, fevers, diarrhoea, dysentery and other bowel complaints, frequently attacked South India. The following tables show the chief causes of mortality in South India from 1874 to 1884.

Table 1.1: Chief causes of mortality in Colonial South India, 1874–1884.

<table>
<thead>
<tr>
<th>Years</th>
<th>Total deaths</th>
<th>Cholera</th>
<th>Small−pox</th>
<th>Fevers</th>
<th>Bowel−complaints</th>
<th>Injuries</th>
<th>Other causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1874</td>
<td>516,848</td>
<td>313</td>
<td>48,343</td>
<td>226,220</td>
<td>37,993</td>
<td>13,065</td>
<td>190,914</td>
</tr>
<tr>
<td>1875</td>
<td>641,260</td>
<td>94,546</td>
<td>24,775</td>
<td>252,042</td>
<td>37,484</td>
<td>12,421</td>
<td>219,992</td>
</tr>
<tr>
<td>1876</td>
<td>680,384</td>
<td>148,193</td>
<td>23,469</td>
<td>230,092</td>
<td>38,176</td>
<td>11,175</td>
<td>229,279</td>
</tr>
<tr>
<td>1877</td>
<td>1,556,312</td>
<td>357,430</td>
<td>88,321</td>
<td>469,241</td>
<td>133,366</td>
<td>16,460</td>
<td>491,494</td>
</tr>
<tr>
<td>1878</td>
<td>810,921</td>
<td>47,167</td>
<td>56,360</td>
<td>374,443</td>
<td>48,083</td>
<td>15,007</td>
<td>269,861</td>
</tr>
<tr>
<td>1879</td>
<td>549,390</td>
<td>13,296</td>
<td>17,840</td>
<td>285,477</td>
<td>23,218</td>
<td>12,619</td>
<td>196,940</td>
</tr>
<tr>
<td>1880</td>
<td>454,101</td>
<td>613</td>
<td>14,529</td>
<td>209,940</td>
<td>19,622</td>
<td>10,845</td>
<td>198,552</td>
</tr>
<tr>
<td>1881</td>
<td>465,682</td>
<td>9,446</td>
<td>15,776</td>
<td>203,542</td>
<td>18,961</td>
<td>11,527</td>
<td>206,430</td>
</tr>
<tr>
<td>1882</td>
<td>470,700</td>
<td>23,604</td>
<td>20,159</td>
<td>188,561</td>
<td>19,958</td>
<td>11,611</td>
<td>206,807</td>
</tr>
<tr>
<td>1883</td>
<td>541,930</td>
<td>36,284</td>
<td>37,975</td>
<td>203,786</td>
<td>22,098</td>
<td>11,509</td>
<td>230,278</td>
</tr>
<tr>
<td>1884</td>
<td>650,335</td>
<td>75,476</td>
<td>61,247</td>
<td>215,977</td>
<td>28,775</td>
<td>11,502</td>
<td>257,358</td>
</tr>
</tbody>
</table>


The epidemic diseases like smallpox and cholera were known to have existed since the pre colonial era. It attacked more than one-fourth of the population in India during the nineteenth century. Till the middle of the nineteenth century, the cause or cure of any of these diseases were not known. Early researches on these diseases ended in blind alleys. Hardly any progress was made over the ancient or medieval beliefs and concepts towards understanding these diseases. After the 1857 mutiny, the Colonial regime became more concerned with the health of the army as there was a
need to maintain a healthy fighting force. It thus sought to record accurately the prevalence of illness in the army, and to develop effective preventive measures to control epidemic diseases. However, Koch’s discoveries that different microorganisms could be the cause for many of these diseases heralded new possibilities. It wasn’t until late nineteenth century, as a result of the experience in combating the plague epidemic, the government made a move towards recognising the importance of public health.

Throughout the late nineteenth and early twentieth centuries, the British made concrete efforts towards dispensing Western medicine through hospitals and dispensaries, promoting vaccination for smallpox, controlling cholera and the implementation of sanitary schemes including water supply, drainage, and conservancy. The epidemics of smallpox and cholera were widespread and resulted in a high rate of mortality in the whole of the Madras Presidency. In the later part of the nineteenth century the two epidemics received the attention of the colonial state, which initiated measures to combat them. The different indigenous medical systems like Ayurveda, the Unani, the Siddha and folk practices prevalent in South India had their own forms of treatment. The next chapter will focus on the extent to which the indigenous and western medical practices provided medical relief to the population.