PUBLIC HEALTH POLICY IN COLONIAL INDIA – THE NATIONALIST PERSPECTIVE 1914-47

Dissertation submitted to the Jawaharlal Nehru University in partial fulfilment of the requirements for the award of the degree of

MASTER OF PHILOSOPHY

AMAN SHARMA

CENTRE FOR HISTORICAL STUDIES
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067
INDIA

2002

Chairperson
Centre for Historical Studies
Jawaharlal Nehru University
New Delhi-110067, India

CERTIFICATE

Certified that this dissertation entitled, **"PUBLIC HEALTH POLICY IN COLONIAL INDIA – THE NATIONALIST PERSPECTIVE 1914-47"**, submitted by **Aman Sharma**, Centre for Historical Studies, School of Social Sciences, Jawaharlal Nehru University, New Delhi, in partial fulfilment of the requirements for the award of the degree of **MASTER OF PHILOSOPHY (M.Phil.)** of this University is his own work and has not been previously submitted for any degree of this or any other university.

I recommend that this dissertation may be placed before the examiners for evaluation.

Mridula Mukherjee

PROF. MRIDULA MUKHERJEE
Supervisor

Centre for Historical Studies
School of Social Sciences
Jawaharlal Nehru University
New Delhi-110067

Mridula Mukherjee

PROF. MRIDULA MUKHERJEE
Chairperson

CHAIRPERSON
Centre for Historical Studies
School of Social Sciences
Jawaharlal Nehru University
New Delhi-110067

CHS Office Phone : Ext. 2456 at (011) 6107676 or (011) 6167557
Fax : 91-11-6165886 E-mail : chsjnu@yahoo.com

ACKNOWLEDGEMENT

I express my sincere gratitude to my guide, Prof. Mridula Mukherjee for her encouragement and help during various stages of the work. She was generous in making her specialized knowledge available to me. I am thankful for her tireless and scrupulous reading of the manuscripts and her invaluable corrective commentary upon them. Not a shadow of doubt crosses my mind, when I feel that my dissertation would have remained, an unfulfilled dream, if she was not there to guide me, step by step. I am also thankful to the other members of the faculty and non-teaching staff of the Centre for Historical Studies for their cooperation.

I acknowledge a particular debt to Dr. Deepak Kumar for initiating me into the field of history of medicine.

I thank all the staff members of National Archives of India, New Delhi, Nehru Memorial Library, New Delhi, and JNU Central Library, for helping me access books, articles and various primary sources needed to complete this work.

I thank all my friends, especially Kanupriya, Aditya, Vaibhav, Rehan and Vivek for their wholehearted cooperation and help which made things easier for me.

I also avail this opportunity to thank my parents, uncle Mr. M.L. Sharma and aunt Ms. Mala Sharma for their continuing love, support and encouragement.

Finally I thank Mr. Rajender Kumar for typing this dissertation with great patience and care.

Above all I am thankful to God for the completion of this dissertation.

I am responsible for any oversimplification and inaccuracies which may remain.

July 2002
New Delhi.

(Aman Sharma)

CONTENTS

ABBREVIATIONS

AMD	–	Army Medical Department
AMS	–	Army Medical Service
CMC	–	Calcutta Medical college
DGIMS	–	Director General Indian Medical Service
GMC	–	General Medical Council of Great Britain
IESHR	–	Indian Economic and Social History Review
IMS	–	Indian Medical Service
IPS	–	Indian Police Service
LMS	–	Licentiate in Medicine and Surgery
LRCP	–	Licentiate of the Royal College of Physicians
LSA	–	Licentiate of the Society of Apothecaries
RAMC	–	Royal Army Medical Corps
VLMS	–	Vernacular Licentiates in Medicine and Surgery

INTRODUCTION

In recent decades, disease and medicine have become important as entry points for the study of social history. They have also become important to the debate on imperialism because now medicine is construed as one of the tools of empire.[1] It is considered that it was as potent as any tool in the arsenal of the imperialists, to effect the hegemonization of the subjects. As the conquest grew in the first half of the nineteenth century, and the need for consolidation arose, it became imperative to preserve the European body from the vagaries of epidemics which were recurrently spread over nineteenth century. Army was one of the most important pillars of the Raj, and to preserve its' health was one of the prime duties of the colonial state. It is generally understood that the concept of sanitation as a part of preventive medicine arose from the military cantonments, and only later on it was employed for the larger native civilian population.

Medicine has been a fertile ground for those wishing to explore the relationship between medical knowledge and colonial power. The power of the European colonizers extended not only to the bodies of the

[1] Daniel R. Headrick, *Tools of Empire: Technology and European Imperialism in the Nineteenth Century,* Oxford University Press, 1981.

colonized, but also to their minds. As per David Arnold,[2] during the nineteenth century western medicine came to exert an increasingly powerful hold over the bodies and minds of the Indian people, to the extent that it fashioned their thoughts, feelings and desires. While acknowledging that western medical intervention often precipitated a violent reaction, he highlights the growing acceptance of western medicine and the principles on which it was based, as evidence of medicine's power as a colonizing force.

In addition, reaction of natives to epidemics has attracted social historians, who have treated them as windows through which to view colonial society. Several other historians have chosen to examine long-term progress of medicine and public health in India.

In 1940 R.P. Dutt[3] had made the following comment about the state of public health and sanitation in colonial India:

> "Provision for the most elementary needs of public hygiene, sanitation or health is so low, in respect of the working masses in the towns or in the villages, as to be practically non-existent".

---

[2] David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth Century India"*, Cambridge University Press, 1993.

[3] R.P. Dutt, *India Today,* Victor Gollancz, London, 1940, p.79.

Radhika Ramasubban[4] has criticized the British for developing a colonial mode of health care, characterized by residential segregation whereby the Europeans were settled in clean civil lines, the army stationed in cantonments, and the natives left to suffer disease and epidemics in town and countryside without any sanitation facilities worth their name.

H.R. Tinker[5] directly and David Arnold[6] in a more sophisticated manner have criticized the local Self-Government institutions in India for making a mess out of public health and sanitation. The Indians in these bodies, according to both of them, had little interest in sanitation and their inexperience prevented them from making any improvement in the sanitary conditions.

Preserving the health of the army was the single most important concern of the British Indian Government. Of the total number of British deaths in the army in the first half of nineteenth century, only 6% were due to military conflict. Rest were caused by – fevers, causing 40% of all death and three-fourth of all hospital admissions; dysentery and

---

[4] Radhika Ramasubban, "Imperial Health in British India, 1857-1900", in Roy Macleod and Milton Lewis (ed.), *Disease, Medicine and Empire: Perspectives on Western Medicine and the Experience of European Expansion,* Routledge, 1988.

[5] H.R. Tinker, *The Foundations of Local Self-Government in India, Pakistan and Burma,* Pall Mall Press, London, 1954, p.73.

[6] David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth Century India,* Cambridge University Press, 1993, p.270.

diarrhoea; liver diseases; and cholera, the greatest killer, particularly when the troops were on the march.[7] The 'relocation costs' involved in sending British troops to garrisons in India and other tropical colonies have been studied in detail by Philips Curtin.[8] Starting with a high mortality rate among the Europeans in tropics, the death rates according to Curtin, began to decrease from around the middle of the nineteenth century, following sanitary reforms in cantonments and improvement in habits and diet.

Besides preserving the health of the army and the European officers along with their families, there was another dimension to the sanitary efforts initiated by the British in India. Government came down heavily in the 1896 plague due to the economic pressure placed upon the British Indian Government by most of its' trading partners. Once regulations against Indian shipping were relaxed, so were the plague measures within India.[9] Similarly the owners of coal mines and tea planters introduced vaccination against small pox and inoculation against cholera in an attempt to improve labour productivity.[10]

---

[7] Radhika Ramasubban, *op.cit.*, n.4, p.39.

[8] Philip Curtin, *Death by Migration: Europe's Encounter with the Tropical World in the Nineteenth Century,* Cambridge University Press, 1989.

[9] Mark Harrison, "Quarantine, Pilgrimage and Colonial Trade: India 1866-1900", *Indian Economic and Social History Review,* No.29, 1992, pp.299-318.

[10] Biswamoy Pati and Mark Harrison, *Health, Medicine and Empire: Perspectives on Colonial India,* Orient Longman, 2001, p.16.

The British take credit for introducing the then state-of-the-art medical technology into India, but there are strong reasons to believe that technology actually lacks the capability to provide health care needed by most of the world's people. Malnutrition and lack of proper sanitation were the two main factors responsible for a large number of deaths and disease among the Indians under the British, but there was nothing concrete that the Government did or strived to do, in order to address these two issues. In the words of Anil Kumar[11] "Though dominating and firing all the shots on the Indian medical scene throughout the British stay in India, colonial medicine, however, could achieve very little for the sake of the teeming millions of India. It merely serviced the Empire, a tiny class of collaborators and the Indian urban elite".

The medical services in India functioned to mainly serve the armed forces, and their duty towards the civilian health was secondary to that of the army. In addition, the covenanted medical services carried a strong sense of racial bias against the Indians. The organization of the medical services in India, the nature of demands for their reorganization, and the Government's response to these demands constitutes the first chapter of my dissertation. Though the organization of medical services has been

[11] Anil Kumar, *Medicine and the Raj: British Medical Policy in India, 1835-1911,* Sage, 1998, p.219.

dealt with by several authors,[12] the demands for their reorganization, especially after 1914, and the manner in which the Government responded to these demands has not yet been discussed in any significant work. Taking leads from the newspapers[13] of this period (1914-47), the recommendations of various committees appointed by the Government during the period 1914-47 have been studied and analyzed. Special emphasis has been placed on the demands of the nationalists for the restructuring of the medical services in India, and their reaction towards the Government's steps in this direction.

Under the Government of India Act, 1919, Public Health was transferred to the provinces and an Indian Minister was in charge of this

---

[12] Anil Kumar, *Medicine and the Raj: British Medical Policy in India, 1835-1911,* Sage, 1998.

The main emphasis of this book is on the colonial medical services upto 1911, along with medical science and education, hospitals and medical research, and epidemics such as plague, malaria, cholera etc., in the period 1835 to 1911. The response of the Indian political class to the Government's public health policy has not been discussed in detail, and this is precisely the area which my work explores.

Mark Harrison, *Public Health in British India: Anglo-Indian preventive Medicine 1859-1914,* Cambridge University Press, 1994.

Again, this work does not go beyond 1914. Besides discussing the public health policies of the British Indian Government, Mark Harrison has tried to trace the evolution of public health in colonial India. However there has been an attempt on his part to white wash the colonial neglect of public health sanitation in India.

O.P. Jaggi, "Medicine in India: Modern Period", in D.P. Chattopadhyaya (ed.), *History of Science, Philosophy and Culture in Indian Civilization,* Oxford University Press, 2000.

This is a detailed work on the history of medicine, both traditional and western, in colonial India. Besides dealing with diseases, medical education and research, this work also throws some light on the Indian Medical Service. Again, this work is poor on analysis and fails to discuss the political dimension of public health in India.

[13] *Amrita Bazar Patrika, Bombay Chronicle and Hindustan Times.*

department, working under the Governor of the province. It was only after the Government of India Act, 1935, came into force that a Council of Ministers was formed in the provinces. Congress formed ministries in majority of the provinces from 1937 to 1939. The Congress had always been vocal in criticizing the Government's public health policy, and by studying the debates in Bombay Legislative Assembly, attempt has been made to ascertain as to what Congress achieved or intended to achieve (one should not forget the financial constraints under which the provincial ministries operated) in the field of Public Health and Sanitation. The recommendations of National Planning Committee[14] appointed by the Congress under the Chairmanship of Jawaharlal Nehru in 1938, have been analyzed, along with that of the Health Survey and Development Committee, chaired by Sir Joseph Bhore.[15] The state of Public Health in India on the eve of independence is clear from the Bhore Committee report, and the nationalists' aspiration have been brought to light in National Planning Committee report. Congress' work in the provinces (Bombay) from 1937-39 serves to enlighten us on its' seriousness about public health and sanitation.

[14] Sub-Committee on Health was headed by Col. S.S. Sokhey.

[15] Bhore Committee was appointed by the Government of India in 1943 and it submitted its' four volume report in 1946.

The third and final chapter deals with medical registration and the Indian Medical Council. The manner in which the Indian Medical Council came into being in 1934, under the Indian Medical Council Act, 1933, speaks volumes about Government's sincerity in streamlining the medical profession. The strings were pulled by the General Medical Council, Great Britain and the Government of India merely complied to the GMC's guidelines. The organizational set up of Indian Medical Council also enlightens one about the racism prevalent in the Government and the vice-like hold of the Indian Medical Service, which was dominated by the Europeans. Imperial Legislative Assembly debates have provided a valuable insight into the issues involved in Indian Medical Council Act. In addition, the issue of medical education for Women has also been touched upon.

CHAPTER I

MEDICAL SERVICES IN BRITISH INDIA – ORGANISATION, PROBLEMS AND REDRESSAL

From 1600 A.D., as the British East India Company expanded its activities in India, the medical needs of the Europeans in service of the company were met by a number of British surgeons associated with the Company. This arrangement continued till 1763, when as a result of the orders passed in Fort William Consultations[1] of 20 October 1763, Bengal Medical Service came into being; it started functioning from January 1764. It set fixed grades or ranks, and definite rules for promotion. Bengal Medical Service at that time comprised of 4 Head Surgeons, 8 Surgeons and 28 Surgeon Mates. Soon after, Medical services were also formed in Bombay and Madras.

In 1775, the Medical services were expanded and Medical Boards set up in each Presidency, in order to administer hospitals for the Europeans. Cornwallis Regulations of 24 October 1788 granted commissions to Medical Officers of the Company and laid down that a new Medical Officer must spend three months in a General hospital as a trainee, and then eighteen months as a hospital mate. From hospital mate

[1] D.G. Crawford, *A History of the Indian Medical Service,* Vol.I, London, 1914, pp.197-203.

he might rise to the position of a Regimental Assistant, and then to a Medical Officer of a sepoy battalion or civil station.[2] These Regulations also made it clear that the officers of the IMS were primarily military officers, and could only be temporarily lent for civil duty.

In November 1857, the Medical Boards were abolished and in their place each Presidency got a Director General (DG). Below the DG, there were Inspector Generals – two in Bengal and one each in Madras and Bombay. Subordinate to Inspector General were the Senior Surgeons. In early 1859, the DG was redesignated as the Principal Inspector General. This new title was abolished in September 1866, and in March 1869 only one Inspector General was left as the head of Bengal Medical Services. In 1873 this title changed to that of a Surgeon General. Finally, in 1895, the title of DG was reintroduced, with the major differences that the DG was now the head of the entire IMS throughout the country.[3]

Indians were not appointed as commissioned officers in the Medical Services till 1855, when a competitive examination was introduced for the first time.[4] However, the number of Indians in the IMS remained low and by 1905, only 5% of the IMS were of Indian origin.

---

[2] Anil Kumar, *Medicine and the Raj: British Medical Policy in India, 1835-1911,* Sage, 1998, pp.127-28.

[3] D.G. Crawford, *A History of the Indian Medical Service,* Vol.I, London, 1914.

[4] In the very first competitive examination held in January 1855, an Indian SCG Chukerbutty, topped the list of successful candidates.

Recruitment to the IMS remained closed from 1860-64, and in this period the Government toyed with the idea of amalgamating the IMS with the Army Medical Department (AMD)[5] of Britain. However, this scheme could not be implemented due to two main reasons. First of all, admission to AMD was restricted only to men of unmixed European parentage,[6] and this would have debarred Indians from joining the service. Secondly, superior attractions of IMS would have drawn the best of AMD cadets, adversely affecting the interests of the British army.

Henceforth, it was decided by the Government that the AMD and IMS were to form one department for the medical administration of the army in the three presidencies, while the Surgeon General was always to be taken from the AMD. There was a lot of protest in the IMS over this subordination of the services to AMD. However, in 1896, the medical services of the three presidencies were put under the direct administrative control of the Government of India.

In Bengal, in the 1760s, Compounders, dressers, and apothecaries were organized into a Military Subordinate Medical Services. Similar

---

[5] Before the Crimean War, Medical services of the British army were constituted entirely on a regimental basis, i.e. every regiment had its quota of medical officers, generally 3 per batallion, its' own hospital and nursing orderlies drawn from the regiment itself. After the Crimean War, on recommendations of Lord Herber, a unified Medical Service was introduced and called as Army Medical Department (AMD), and all medical officers in the Army were placed in one list for promotion, appointments etc. In 1898, AMD was renamed as Royal Army Medical Corps (RAMC).

[6] Before formally joining the AMD, each candidate was asked to sign a declaration that he was of unmixed European parentage.

measures were undertaken in other presidencies in the early 19th century. In 1833, a comparable civil establishment had come into being in Bengal, and two years later, with the founding of the Calcutta Medical College, Military and Civil Assistant Surgeons, and Hospital Assistants were required to undergo a two-year course of instruction, and an apprenticeship at a recognized medical institution.

STRUCTURE OF THE MEDICAL SERVICES IN INDIA IN 1914

Medical Services in 1914 were composed of the Royal Army Medical Corps (RAMC) and the Indian Medical Service (IMS). RAMC was headed and directed by a Major General and Colonels of the Army Medical Service. RAMC was exclusively military and solely concerned with the care of the British troops. It formed part of the powerful corps which was entrusted with the medical and sanitary care of the British army in all parts of the world. The strength of RAMC in India was determined by the war office, which nominated the officers detailed for duty in India. The normal tour of service in India for a RAMC officer was 5 years, but this could be extended to 7 years.[7] In 1914 the sanctioned strength[8] of RAMC officers in India was 320. Of these, 15 held staff appointments and the rest performed executive duties.

---

[7] Verney Lovett Committee Report, 1919.

[8] Ibid.

The IMS was raised and maintained basically for army purposes, but since the army did not need its services at all times, the Government appointed the IMS officers as professors, Sanitary commissioners, chemical analysts or even superintendents of lunatic asylums.[9] Officers of the IMS initially served in the army, and after two years of service they could apply for civil employment. In March 1914, the number of IMS officers on military duty was 265, and 470 were in civil employment.[10]

Both RAMC in India and the IMS were, so far as military work was concerned, under the Director, Medical Services, in India. He was the staff officer of the Commander-in-Chief, and was charged with the distribution of the entire medical forces at the disposal of Commander-in-Chief. He was not however responsible for recruitment, promotion or retirement of officers of either service. These responsibilities lay, in case of RAMC, on the Director General Army Medical Services, and in case of IMS, on the Director General Indian Medical Service (DGIMS).[11] DGIMS was ordinarily a member of the Imperial Legislative Council, and worked with the

---

[9] Civil duties of the IMS officers could be listed as:

(a) Attendance on police and on all Government servants, entitled to free medical attendance.
(b) Administration and inspection of all Government hospitals and dispensaries.
(c) Charge of the district headquarter hospital and the performance of more important surgical operations in such hospitals.
(d) Medical-legal work connected with the administration of justice.
(e) Examination of recruits for army, police and state employment.
(f) Issue of health certificates to all Government servants.

[10] Verney Lovett Committee Report, 1919.

[11] P. Hehir, *The Medical Profession in India,* London, 1923, pp.3-5.

Government of India with regards to civil matters through the Home Department. In promoting his officers, the DGIMS had to obtain the concurrence of the Commander-in-Chief, whose advisor in such matters was the Director, Medical Services.[12]

The working strength of medical services (both civil and military) was constituted by Assistant Surgeons and Sub-Assistant Surgeons. Military Assistant Surgeons were recruited only among the Europeans and Anglo-Indians. They were trained for four years at medical colleges in Calcutta, Bombay and Madras, at the expense of the Government. Military Assistant Surgeons served with British troops in India and in British station hospitals. They did not normally serve with Indian troops or under IMS officers.[13] Military Sub-Assistant Surgeons on the other hand, were recruited among the Indians and generally served among the Indian troops, and were attached to Indian station hospitals, serving under IMS officers.[14]

In the provinces, Surgeon General or the Inspector General headed the civil medical department, and was responsible for the superintendence of all hospitals, dispensaries, lunatic asylums etc. and

---

[12] Director, Medical Services could be an officer of the AMS or the IMS, though generally he belonged to the AMS.

[13] Verney Lovett Committee Report, 1919.

[14] Anil Kumar, op.cit., n.2, pp.145-46.

for the supervision of all medical colleges and schools in the province.[15] The Civil Assistant Surgeon grade in a province was open to Europeans, Anglo-Indians and Indians.[16] They were employed for civil duty and were not required to serve in the army. In contrast, the civil Sub-Assistant Surgeons had to sign a bond that bound them to serve the army in case of emergency.[17]

The compounders constituted the lowest cadre of medical services. They were recruited locally, and were expected to have sufficient education to read and write in vernacular, and were encouraged to attain a working knowledge of English.

The medical services in India – both covenanted and uncovenanted – were therefore organized on strictly racial lines; RAMC and Military Assistant Surgeon served only among the European troops, whereas Military Sub-Assistant Surgeons were meant to serve among the Indian troops. Military Assistant Surgeons were pass outs, from medical colleges, whereas Military sub-Assistant Surgeons were educated in much inferior medical schools, thereby making it clear that for the Government medical needs of Indian troops were secondary to that of the British troops.

---

[15] Kabita Ray, *History of Public Health: colonial Bengal 1921-1947* (Calcutta, 1998), pp.180-85.

[16] Anil Kumar, op.cit., n.2, p.147-48.

[17] Verney Lovett Committee Report, 1919.

PROBLEMS ASSOCIATED WITH THE ORGANIZATION AND WORKING OF THE MEDICAL SERVICES IN INDIA

IMS was basically raised for the army. In peace time when the army did not need the services of all IMS officers, they were appointed to civilian offices. At times IMS officers held appointments totally unconnected with medical profession – one became the Postmaster-General in Bombay, another Conservator of Forests, while many others worked as Mint and Assay Masters.[18] During war time, many of the IMS officers constituting the war reserve, reverted from civil to military duty.[19] Even these could not suffice the military needs, and it was found necessary to utilize the services of private practitioners and Civil Assistant Surgeons. This led to a great deal of hardship to the civilian population.

A fairly large class of native medicos passed out from the medical colleges of Calcutta, Bombay and Madras. They had almost the same qualifications and expertise as those in the IMS, but were placed much below in rank, as Sub-assistant Surgeons, with hardly any scope for promotion. Even the Apothecaries,[20] who had to pass only one medical

---

[18] Deepak Kumar, *Science and the Raj, 1857-1905,* Oxford University Press, 1995, p.94.

[19] At the beginning of August 1914, the total number of IMS officers in civil employment were 470; of these 331 constituted the military reserve. During World War-I, about 350 IMS officers were reverted from civil to military duty.

[20] Apothecaries came exclusively from European and Eurasian stock.

examination drew more salary than the Indian Assistant Surgeon. Indian surgeons began with Rs.100 p.m. and ultimately drew Rs.200 p.m. In contrast, a fresh IMS recruit was paid Rs.420 p.m., which was nearly double his market value at home.[21] In addition, IMS officers on civil duty could also indulge in private practice.[22]

In 1866, the Sub-assistant Surgeons of Bengal, North-Western Province, and Punjab had submitted a memorandum, airing their grievances, but the Government of India rejected it. Again in 1882, a somewhat similar appeal was made by the Principal of Temple School of Medicine, Patna. In reply, the Surgeon General of Bengal remarked that the Assistant-Surgeons as a class were overpaid for the work they performed, that the cost of educating them fell mainly on the state, and they rarely failed to make a large addition to their income by private practice.[23]

Several demands were raised by Indians from the medical profession as well as by the Indian National Congress, to constitute a purely civil Medical Service in India, and also improve the service

---

[21] Deepak Kumar, op.cit., n.23, p.95.

[22] It was a general complain that IMS officers charged exorbitant sums from their patients. In order to curb this tendency, Lord Curzon formed certain rules, that limited their fees to a modest sum. The British Medical Association denounced this restriction as "an insult to the service", but it had to withdraw quickly when Curzon threatened to publish such cases.

[23] Deepak Kumar, op.cit., n.23, p.95.

conditions of Sub-assistant Surgeons. In continuation of such demands, Mr. Sastri[24] moved a resolution in the Imperial Legislative Council, recommending the constitution of a Civil Medical Service, which should be wholly independent of the medical organization of the Indian Army. The resolution also stated that the higher medical posts, at present filled by officers of the IMS, should be transferred to the Civil Medical Service; and that the Civil Medical Service should be recruited from the civil medical officers and the independent medical profession. He also proposed that the salaries of the IMS officers employed on civil duty, should not be enhanced, as recommended by the Public Service Commission,[25] and that Military Assistant Surgeons should not be given preference over Civil Assistant Surgeons, and that the former should not receive more than one-sixth of the higher posts reserved for subordinate medical officers.

All these were infact genuine demands, because there was no logic in keeping the civilian medical needs secondary to that of the military. The presence of a war reserve meant that whenever some trouble came, there was an absolute dislocation and paralysis of civil work throughout the country. Also, due to the appointment of IMS officers on civil duty, the

[24] Imperial Legislative Council Debates, 8 March 1918.

[25] The report of the Public Service Commission was published in 1917. Indian Nationalists regarded this report as disappointing as it suggested no measures to reduce the strong European element in the Government departments.

Indian talent had no opportunity to come up, the progress of independent medical profession was hindered, and it made the civilian population dependent for their ordinary medical needs, on a service which was called upon to serve in the military, both at the beginning, and at the end of their careers, and in wartime. In addition, the increase in salary of the IMS[26] officers, as suggested by the Public Service Commission would be a large drain on the public exchequer. Similarly the professional chairs could not be considered a private property of the IMS officers.

In reply to Mr. Sastri's resolution, Director General IMS[27] laid stress on the research achievements of the IMS, on the excellence of the medical colleges, and on the small incomes from the private practice, as compared to that in England.[28] He also pointed out that Indians were being admitted into the IMS in steadily increasing numbers. According to him, there was no need to form a separate Civil Medical Services, as the Provincial services could do all that could be done by such a service. As far as the war reserve for the IMS was concerned, it was the existence of this reserve, according to DGIMS, that enabled the Indian divisions, when

---

[26] The salaries of IMS officers were much higher than even the officers of the Indian Police Service. A fresh IPS recruit started at Rs.250 p.m., whereas the basic pay of a Surgeon-Captain in 1903, started at Rs.450 p.m. Higher ranks in IMS also earned more than senior IPS officers.

[27] DGIMS was a member of the Imperial Legislative Council. Surgeon General Edwards was the DGIMS at that time.

[28] This was to justify the salary enhancement proposals in the report of the Public Service Commission.

they proceeded overseas, to go fully mobilized, at the most critical period in the Empire's history.

Thus it is clear that the DGIMS (read Government of India) was more concerned with the welfare and expansion (security) of the 'empire', than with the medical needs of the civilian population. In fact one should not forget that IMS was solely for the needs of the army, and their civil functions were just a time of leisure for the IMS officers, and a time to earn a fortune from private practice.[29]

The resolution moved by Mr. Sastri was put to vote in the house, and as expected, it fell, despite being supported by all non-official Indian members of the Imperial Legislative Council.

There was yet other demand for making IMS a purely civil service, but for altogether different reasons. The demand was raised by Europeans in 1911, when they realized that the number of Indians entering the IMS was increasing. Besides making IMS a purely civil service, it was also proposed to organize RAMC in such a manner as to enable it to fulfill all the military needs. The motive was to exclude Indians from the army, because they could enter the IMS but not the RAMC.

---

[29] It has been rightly said, 'Forest officers were mainly estate mangers, veterinarians were there for horse breeding, IMS were for the army and agriculture department for revenue'.

This scheme was however opposed by the Government, on the grounds that the army could not afford to loose the services of well trained and highly qualified civil surgeons, all of whom possessed 4-7 years of military experience, had an intimate knowledge of the country, and had unrivalled opportunities of acquiring skill as operating surgeons and as administrators of large hospitals.

The IMS officers on civil duty, were free to take private practice, so far as this did not interfere with their duties to the state.[30] During the first World War most of the IMS officers on civil duty were asked to serve with the military. This hit the pocket of the IMS officers, as now they could not indulge in the lucrative private practice. Also, in the army, the IMS officers were generally subordinate to the RAMC officers. This naturally led to friction between the IMS and RAMC officers, leading to a negative impact on the overall working of the medical services.

[30] There were however certain restrictions on private practice by the IMS officers, i.e.

(a) Principals of Medical Colleges and certain superintendents of hospitals were allowed consulting practice only.

(b) Professors of Medical Colleges were in some cases debarred from private practice or restricted to consulting practice, and in other cases allowed unrestricted practice, as per the nature of their duties.

(c) Superintendents of certain jails were permitted to engage in private practice whenever provincial Governments considered that this could be done without determent to their jail duty.

(d) Officers of the public health department and officers in charge of medical store depots were debarred from private practice of any kind.

(e) Officers of medical Research Department and chemical examiners were debarred from private practice except consultation practice, and were paid a proportion of fees charges for private bacteriological work done at Government labs.

ATTEMPTS AT REDRESSAL OF ISSUES CONCERNING MEDICAL SERVICES

In order to look into the feasibility of having a separate civil medical service, the Government of India, in 1919, appointed a Committee[31] under the presidentship of Sir Verney Lovett.[32] The Committee was first asked to formulate a general scheme for the organization of medical services in India. As soon as this report had been submitted, the Committee was to proceed with the examination of the position of Military and Civil Assistant and Sub-assistant Surgeons, and the provincial subordinate medical services, and also the future organization of the medical store department.

Verney Lovett Committee's general recommendations were that an Indian Medical Corps should be formed that shall take the place of the IMS, and in addition do the work now done by the RAMC in India. This new Corps should also recruit for, and include the higher civil medical

---

[31] This Committee was named the 'East India Medical Services Committee'.

[32] Other members of this Committee were:

a) Major Genral G. Cree, AMS
b) Major General P. Hehir, IMS
c) Major General H. Hendley, IMS
d) Hon'ble Major Genral, G.G. Griffard, IMS
e) Lt. Colonel A. Shairp, CMG
f) Lt. Colonel G.B.A. Rind

Member Secretary of this Committee was Major A.A. McNeight, IMS. Indian members who were later co-opted by the Committee were Hon'ble Colonel H.E. Banatvala, IMS; I.G. Civil Hospitals, Assam, Lt. Colonel Bhola Nath; and Sir Temulji B. Nariman from Bombay.

service of the country. The Corps should have an ordinary war reserve of officers lent to civil administration for five years or less, and a special reserve of officers belonging to the civil branch, who should be recalled to military duty only on occasions of grave national emergency, and not even then, if they are holding certain residuary appointments. The Corps should include transfers from the AMS and the RAMC. Military side of the Corps should have its own depot and school of instruction. Junior officers of the Corps should, shortly after their first arrival in India, be attached to a large civil hospital or school of tropical medicine for practical instructions in tropical diseases. Special reserve of the corps should be partly recruited from the Civil Assistant Surgeons and independent medical practitioners. The Committee also suggested that the Governments of various provinces should supplement their contingents of officers from Indian Medical Corps with exclusively civil medical officers, whom the provincial Government shall themselves appoint. The racist lobby was also satisfied by the Committee, when it suggested that special arrangements should be made by the Government, in order to secure European medical attendance for European officers and non-officials, when required. It was proposed that a system of optional retirement on gratuity should be adopted in order to secure a sufficiency of candidates for the new corps. Admission to the Corps should be through the portal of a single examination held in England, twice a year.

Selected Indian students from the five Indian universities should be assisted by a scholarship to compete in this examination. In order to encourage medical research, special opportunities should be provided to officers. Certain posts in sanitary and other departments should be reserved for officers of the new corps. To make the corps more attractive to officers, it was suggested that the salaries of officers should be enhanced, and there should be a more liberal provision for leave, full pension should be admissible at an earlier date, position of civil administrative medical officers should be improved and better buildings be provided for Indian station hospitals. As far as promotion was concerned, it was recommended that it should be on the same basis as in the RAMC; every officer in his seventh to tenth year of service, should undergo a post-graduate course at Royal Army Medical College. In addition, all officers should, on attaining the rank of a Lt. Col., make their choice between careers of, military administration, or, Professional employment as consultants, or, seek a permanent civil employment. No officer should be eligible for transfer from civil to military employment or vice versa, after promotion to the rank of a Lt. Col. Also, the head of the military side of the new corps should be an officer of the Corps.

The Committee later on suggested measures for improvement in minor and provincial services.[33] There was however, no radical change that was suggested; only general recommendation of the nature of improving educational standards, and increasing salary, etc., were suggested.

Analyzing the various recommendations of the Verney Lovett Committee, it is quite evident that the Indian Medical Corps of Verney Lovett was hardly different from the IMS. The method of recruitment remained more or less the same; it was still closely associated with the Army Medical Service and the RAMC; and had the provision for war reserve of officers. Only piece meal changes were suggested i.e. recall of war reserve officers to military duty was made complex, more emphasis was laid on tropical medicine, scholarships were to be provided for selected Indian students so that they could compete in the competitive examination held in England, etc.

In the same year as Verney Lovett Committee gave its recommendations, the Government of India Act, 1919 was passed in

---

[33] It included:

a) Military Assistant Surgeons
b) Military Sub-assistant Surgeons
c) Civil Assistant Surgeons
d) Civil Sub-assistant surgeons
e) Medical store departments
f) Sanitary and bacteriological department
g) Alienist department
h) Indian Medical Corps and nursing services of the army in India.

England. According to one of the provisions of this Act, public health and sanitation was a transferred subject i.e. a minister in each province was in charge of this department. This necessitated changes in the organization of Superior Civil Services in India. To this effect, a Royal Commission, under the Chairmanship of Viscount Lee of Fareham, was appointed in June, 1923.[34] This Commission was asked to inquire into the Organization and the general conditions, financial and other, of the Superior Civil Services, the possibility of transferring immediately or gradually any of their present duties and functions to services constituted on a provincial basis, and the methods of ensuring and maintaining such European and Indian recruitment as might be pronounced necessary. Besides Viscount Lee, the Commission had eight other members.[35] The report of the Commission was published on 27 May 1924. So far as future organization was concerned, the recommendations centred round the plan of entrusting to local Governments future recruitment for the services operating in the Transferred fields of education, agriculture, veterinary, forests (in Bombay and Burma), and of certain branches of

---

[34] L.F. Rushbrook Williams, *India in 1924-25,* Calcutta, p.65.

[35] The members included

a) Sir Reginald Craddock, lately Lt. Governor of Burma
b) Sir Cyril Jackson
c) Khan Bahadur Sir Muhamad Habibullah
d) Rai Bahadur Hari Kishan Kaul
e) Mr. David Petrie
f) Mr. Reginald Coupland
g) Mr. Bhupendra Nath Basu
h) Sir Chimanlal Setalvad (he was subsequently replaced by Mr. N.M. Samarth)

engineering. Regarding medical services, the Lee Commission recommended the Indianization and provincialization of the services, it recommended separation of civil and army medical services. For civil medical aid, a civil medical services was recommended to be constituted for each province, all the members of which were to be liable to serve with the RAMC (India) in the event of a war involving general mobilization. In the army, a new medical corps, the RAMC (India) was suggested. It was to be a corps of the Indian Army, composed of Indian and British personnel. The main nucleus was to be a permanent element in India, to which RAMC (British) officers in Indian would be attached. In order to please the lobby of British Medical officers, Lee Commission made sure that British officers continued to hold a certain minimum number of posts in the districts, and also that, Europeans got treatment only from European doctors. Lee Commission also recommended an increase in emoluments and allowances of officers. Another set of recommendations of the Lee Commission were concerning professional appointments in Government colleges and hospitals. They were mainly an endorsement of the recommendations of the Islington Commission,[36] and were aimed at promoting scientific research in medicine.

[36] Islington Commission had recommended changes in educational appointments. The chief among these was, to divide educational appointments into clinical chairs and scientific chairs. Under the former came, appointment for teaching medicine, surgery, midwifery, ophthalmology etc. The scientific chairs were to be made full-time appointments, as in other countries.

Lee Commission report was discussed in the Central Legislative Assembly,[37] and almost all the non-official members expressed strong dissatisfaction with the recommendations of Lee Commission. Pt. Motilal Nehru moved an amendment to the resolution of Home Member, Sir Aleaxander Muddiman (calling for accepting Lee Commission recommendations), calling for an end to recruitment of officers outside India, and to consider the alleged grievances of the present incumbents of the services, and to recommend such measures of redress, as a Committee elected by the House might recommend. Pt. Motilal Nehru's amendment was passed by the house, but later on reversed by the Council of State. The official majority in both the houses made sure that the resolution of Home member was passed without any major amendments.

To conclude, the medical services in India catered primarily to the needs of the army; their civil functions came second. There was a huge public support in India for the creation of an exclusively civil medical service; Congress and several other individuals, both within and outside the medical services, repeatedly raised demands to this effect. The Government reacting in its own peculiar way, appointed a series of commissions and committees, which were always dominated by the

[37] Imperial Legislative Assembly Debates, September 1924.

Europeans, and their reports merely endorsed the Government's own stand. Though public health and medicine was a transferred subject under the Government of India Act, 1919, the power over the medical services was never really passed to the provincial legislatures and ministers in charge of public health. It was left to the nationalist members in the Central Legislative Assembly, and in the provincial Assemblies, to raise demands for the reorganization of the medical services; similar demands were raised by nationalists outside these bodies also.

CHAPTER II

CONGRESS AND PUBLIC HEALTH

In his dispatch to the Secretary of State (Lord Crewe), dated 25 August 1911, Lord Hardinge, the Viceroy of India, had suggested that the "only way to satisfy the just Indian demands for a larger share in government of the country, without impairing the supreme authority of the Governor-General in Council, was to recognise provincial autonomy, subject to the power of the Government of India to interfere in cases of misgovernment, but ordinarily restricting their functions to matters of imperial concern".[1] In 1914 the Congress asked the Government to 'redeem the pledge of Provincial Autonomy contained in the Despatch of 25 August 1911. Finally, in 1919, the proposals given by Edwin S. Montagu, the Secretary of State for India, and Lord Chelms ford, the Viceroy, were enacted into the Government of India Act. The principal changes introduced by this Act related to the provinces. The provincial subjects were divided into Reserved and Transferred. The latter included local self-government, medical administration, public health, education, public works, agriculture, fisheries, cooperative societies, forests, excise, registration, development of industries, control of dramatic performances

[1] Anil Chandra Banerjee, *The Constitutional History of India, Vol.II: 1858-1919,* Macmillan, 1978, p.399.

and libraries.[2] There was a minister in charge of each of the transferred subjects. However, with respect to public health the powers of the provincial legislature could be restricted by the central legislature.[3] Health functions of the Government of India were reduced just to India's international health obligation, including port quarantine and marine hospitals, census, and legislation with respect to certain subjects such as inter-provincial spread of infectious diseases.

As per the Government of India Act, 1935, the distribution of health functions between Center and the provinces remained practically unaltered. However, a large measure of autonomy was granted to the provinces as compared to the Government of India Act, 1919. As a result, the provincial legislatures and executive were unfettered in the development of their internal health policy and its implementation. Besides Union list and the State list for legislation, the Government of India Act, 1935, brought in a third list known as the concurrent list. It had two parts:[4] *Part I* included subjects such as legal, medical and other professions; lunacy and mental deficiency, including places for the reception or treatment of lunatics and mental deficients; poisons and dangerous drugs, etc. *Part II* included health insurance, prevention of the

---

[2] *Ibid.*, pp.433-434.

[3] *Ibid.*, pp.434.

[4] K.T. Shah, *Provincial Autonomy (Under the Government of India Act, 1935)*, National Publications Society, 1937, pp.316-322.

extension from one unit to another of infectious or contagious diseases or pests affecting men, animals or plants, etc. For the subjects under Part II of the concurrent list, the Central Government had the power of giving directions to the provinces if necessary. Provision for this purpose was made in the Central Act dealing with any of these subjects.

One of the main drawbacks from which Government of India Act, 1919 and also the Government of India Act, 1935 suffered was that, finances were still under the control of the Governor-in-Council. As a result the Ministers or the Council of Ministers (Government of India Act, 1935) in the provinces could make very few advances in the pursuit of their policies.

PUBLIC HEALTH ADMINISTRATION IN PROVINCES

The minister in charge of public health was designated as the Minister for local Self-Government.[5] He was responsible to the provincial legislature and assisted by a Secretary. He had two technical advisors who were responsible, subject to his control, for the administration of Medical and Public Health Departments respectively. The former was called Surgeon General[6] and the officer-in-charge of Public Health was the

[5] The name local Self-Government was changed to Public Health and Local Self-Government from 1 April 1937.

[6] The designation 'Surgeon General' applied only to the three Presidencies; in rest of the provinces the head of the Medical Department was designated as the Inspector General of Civil Hospitals.

Director of Public Health.[7] Health administration of jails was in the technical charge of the Inspector General of Prisons, who worked under the provincial minister in charge of prisons.[8]

Under certain rules, the post of the head of the civil medical service in provinces was reserved for the officers of the Indian Medical Service (IMS).[9] Though the right to choose the incumbent of this post rested with the provincial Government, his selection had to be made from a panel of names drawn up by the Central Government. As regards the Director of Public Health, Provincial Government had the discretion either to appoint an IMS officer or an officer belonging to the provincial public health service.

Local bodies were responsible for health administration in their respective territories. The legal provisions defining their duties and powers were incorporated in the Self-Government Acts that had brought them into existence. Large municipal corporations such as those of

---

[7] In North West Frontier Province (NWFP) the posts of Inspector General of Civil Hospitals and that of Director, Public Health, were combined into one.

[8] In Orissa and Sind a single officer controlled Medical and Public Health activities for the general population as well as the health administration of jails.

[9] Under provisions of the Section 246 of the Government of India Act, 1935, a certain number of posts in the provinces had been reserved by the Secretary of State for members of the Indian Medical Service (IMS).

Under the same section a certain number of posts under the Central Government were also reserved for the IMS.

As IMS was dominated by European Officers, section 246 of the Government of India Act, 1935, ensured that a certain number of European Officers were always present in the public health department in the provinces.

Calcutta, Bombay, Madras and Karachi had been constituted by special Acts. Rest of the municipalities in three presidencies, Sind and other provinces were governed by a single Municipal Act in each province, passed by the provincial legislature concerned. District Boards constituted the local authorities for the non-municipal areas in the districts.[10] In addition, smaller units of local self Government, such as village panchyats existed in certain provinces; Union Boards existed in other provinces. They all were subject to the control of District Boards.[11]

The powers conferred on these local authorities concerning health matters related to general sanitation, control of infectious diseases, regulation of housing construction, control of the purity of food and water supplied, abatement of nuisance, and registration of vital statistics.[12] Municipal authorities generally had larger powers than rural local bodies. All local bodies had the power to appoint and control their own establishments, including the health staff. In certain provinces,[13] however, the provincial Governments had made themselves responsible for the maintenance of cadres of health officers for both urban and rural

---

[10] In some province such as Punjab and Bombay, there existed local boards within the District Board area, and they were subordinate to the latter.

[11] H.R. Tinker in this work *The Foundations of Local Self-Government in India, Pakistan and Burma* (1954) has given a detailed account of the local authorities involved in Public Health Services.

[12] *Ibid.*, pp.179-196.

[13] Madras and United Province.

areas. In those provinces in which local bodies appointed their own health officers, control by the provincial Government was ensured by the statutory requirement that prior sanction of the latter was needed for the appointment or dismissal of health officers. Other members of the Public Health staff maintained by the local bodies were generally appointed and controlled by the local authorities themselves.

The officer responsible for medical administration in a district was the civil surgeon. He was in charge of the district headquarters hospital and was the inspection officer for all other public hospitals and dispensaries in the district. In certain provinces he was responsible for public health administration also.

CONGRESS AND PUBLIC HEALTH

From its early days Indian National Congress had been a critic of the various policies of the British Indian Government that had served to impoverish India and the Indians. Though it was only in 1940 that Congress' stand on matters related to public health was brought out in the form of National Planning Committee report, the broad outlines of its thinking about public health were known long before. It was a result of this thinking that even without the presence of a blue print like National

Planning Committee report, the Congress Ministries in the provinces[14] could function in the direction of public health in accordance with the party's stand on this matter. National Planning Committee was constituted by the Congress in 1938 under the Chairmanship of Jawaharlal Nehru. It had several sub-committees,[15] each of which had to submit a memorandum in continuation of the report dealing with the present state of affairs within its purview, lay down the objectives to be realized within a specific period and formulate the methods by which the objectives were to be achieved.[16]

Col. S.S. Sokhey was the Chairperson of the National Health sub-committee. Following is a brief outline of some of its recommendations:[17]

1. Dietary standards need to be substantially raised and made adequate and more balanced. Dietary standards laid down by the Technical Committee of the Health Committee of the League of Nations, with a permissible reduction of 8% be accepted for India.

2. India should adopt a form of health organization in which both curative and preventive functions are suitably integrated and administered through one agency.

---

[14] Congress was in power in United Province, Bihar, Orissa, Central Province, Bombay, Madras, NWFP and Assam (1938-39) in the period 1937-39.

[15] There were 29 sub-committees in total.

[16] *National Planning Committee Report.*

[17] *Ibid.*

3. Such an integrated system of health organization could be worked only under state control.

4. For the proper functioning of such an organization, medical and health research in the widest possible field is essential. This research should therefore form an important function of a health organization, and this should include the application of scientific methods for the investigation of indigenous and other methods for the maintenance of health and prevention and cure of diseases.

5. There is a need to increase rapidly and substantially, the number of qualified medical men. A large number of training centres are therefore needed.

6. Training of a large number of health workers, in practical, community and personal hygiene, First-aid and simple medical treatment, stress being laid on the social aspects and implications of medical and public health work. Efforts should be made to achieve in one year a target of one health worker per thousand population. Selected health workers should be given further training at suitable intervals.

7. Efforts should be made at providing one qualified person per 100 population and one bed per 600 population within the next 10 years. This should include adequate provision for maternity cases.

8. Medical and health organization should be so devised and worked as to emphasize the social implications of this service. Objective should be a free public service manned by whole time workers trained in scientific method. To this aim, a chair should be established in every medical school for special training in social aspects of medicine and public health.

9. Adequate steps need to be taken to make India self sufficient in production and supply of drugs, biological products, scientific and surgical apparatus, instruments and equipments and other medical supplies.

10. A pharmacopoeia committee should be appointed to draw up an Indian Pharmacopoeia (IP), and research should be particularly intensified to determine the action of drugs traditionally used in India.[18]

11. No secret remedies or remedies whose exact composition is not stated on the labels of the containers in the clearest possible terms should be allowed to be sold. Proprietary remedies whose

[18] The foresightedness of the National Planning Committee can be judged from the fact that it has been quite recently that the Council for Scientific and Industrial Research (CSIR) has initiated a program to study the scientific basis of traditional remedies (mostly herbal). Infact worldwide several drug companies have derived important leads for drug discovery from the traditional herbal drugs used in India.

composition is clearly indicated, may, however be allowed to be sold under proper supervision.

12. No individual or firm, Indian or foreign should be allowed to hold patent rights for the preparation of any substance useful in human or veterinary medicine. State should encourage and endow research and suitably recognize and reward those who achieve successful results.[19]

13. An attempt should be made to absorb the practitioners of Ayurveda and Unani Systems of Medicine into the state health organization by giving them further scientific training wherever it is necessary. Medical training in every field should be based on scientific methods.

It was not only after independence that efforts were initiated to achieve the goals set by the National Planning Committee, in fact much before the recommendations of National Planning Committee were put down in writing, the Congress Ministries in Provinces (1937-39) had used their brief stint in power to make available public health and sanitation facilities to the poor millions in their respective provinces. However,

[19] Infact this was very essential in order to make drugs available to the people at affordable rates. Indian Patents Act, 1970, largely conformed to this view point as it did not grant product patent; only process patent was granted. It was for this very reason that the drugs were available in India at one-tenth their international price.

considering the limited powers these ministries enjoyed[20] and the short period of their existence, it would not be fair to judge them wholly by what they achieved; their intentions and whatever they planned to do, in the field of public health and sanitation shall also have to be taken into account.

BOMBAY, 1937-39 – A CASE STUDY

In order to co-ordinate the activities of the different Congress Ministries, so that they all worked towards the attainment of a common goal, a central control board called as the Parliamentary sub-committee was formed by the Congress; it's members were Sardar Vallabhbhai Patel, Maulana Abdul Kalam Azad and Rajendra Prasad.[21] Thus the study of the working of any Congress led Provincial Government shall give a fair idea about the plans and policies of the Congress as a whole.

It was in Bombay that the foundations of the Indian National Congress were laid. Bombay has produced many stalwarts of the national movement, like, Ranade, Tilak, Dadabhai Naoroji, Gokhale and Pherozshah Mehta. Intensive political activity by the Congress, spanning over several decades had served to create political awareness among the people of Bombay Presidency. A study of Bombay Legislative Assembly

---

[20] The strings of the public exchequer were still in the hands of the Governor.

[21] P.N. Chopra (ed.), *Towards Freedom, 1939-47, Vol.I (Experiment with Provincial Autonomy, 1 Jan. – 31 Dec. 1937)*, ICHR, 1985.

debates during the period (August 1937 to August 1939) gives an insight into the kind of public health and sanitation problems faced by the presidency, and the measures that the members of the house proposed, in order to make public health facilities available to the masses. The various issues of public health that cropped up in Bombay during the period 1937-39 are as follows:

Rural Public Health : About 90% of the British Indian population resided in villages. However, public health and sanitation facilities in rural areas were virtually non-existent. According to Musaji E. Patel[22] (Broach subdivision), thousands of villages in the presidency were without any medical aid. Under the Epidemic Rules, 1925, and several other Acts relating to public health and medical aid, village sanitation and public health was under the control of local Boards, who were always short of funds, and hence the health of villagers was simply pitiable. Therefore, if any progress was to be made in this direction, the power of the local Boards in matters of medical aid was needed to be curtailed.

Mrs. Salima Faiz B. Tyabji[23] (Bombay city Girgaun, Women's Muhammadan, urban) opined that every village should have its own dispensary, and if this was not possible, some arrangements should be made so that villagers could reach a dispensary in a reasonable time.

---

[22] *Bombay Legislative Assembly debates*, 19 August 1937.

[23] *Ibid.*

Several members[24] were in favour of providing Quinine free of cost in rural areas, using the services of the post office, village school master, panchayat etc. Dr. J.A. Collaco also suggested the raising of Cinchona plantations in India.

I.I. Chundrigar[25] (Ahmedabad district) suggested that as was being done in Madras presidency, the scheme of subsidized medical practitioners should be started in Bombay on a massive scale. According to him there was a great concentration of doctors in the presidency, district and taluka towns, but there were very few doctors in the rural areas. In order to induce the doctors to practice in rural areas the Government should introduce a scheme of subsidized doctors.[26] He also suggested the scheme of travelling dispensaries and the visit of doctors at village fairs. Minister for Excise, Public Health and Medicine, Dr.M.D.D. Gilder[27] stated that the scheme of subsidized medical practitioners was

---

[24] D.J. Ferreira (Thana cum Bombay suburban district). *Bombay Legislative Assembly debates*, 19 August 1937.

Dr. J.A. Collaco (Bombay City). *Bombay Legislative Assembly debates*, 1 September 1937.

[25] *Bombay Legislative Assembly debates,* 1 September 1937.

[26] In this scheme, the Government paid a subsidy to the doctors who settled in rural areas where people were too poor to enable the doctors to earn a living. In Bombay presidency this scheme was started in 1936 on an experimental basis in certain areas. In 1938-39, out of the budgeted Rs.1 lakh under this scheme, Rs.50,000 was to go to practitioners of indigenous medicine.

[27] *Bombay Legislative Assembly debates,* 1 September 1937.

offered to six districts.[28] Out of these, four had accepted the scheme, and Medical officers had been appointed in these places and the Government had also formed rules to this effect. The scheme according to Dr. Gilder was working satisfactorily. Dr. Gilder also stated[29] that the Government has formulated a policy that locals shall be encouraged in the subsidized medical practitioners scheme, and that the subsidy shall be for seven years. Khan Bahadur Abdul Latif Haji Hajrat Khan however opined that the scheme of subsidized medical practitioners was a failure because they still charged money from the villagers; instead the scheme of dispensaries, which was a success should be expanded.

The inadequacy of dispensaries in rural areas was pointed out by several members of the house on various occasions. Mahomedbawa M. Patel[30] (Ahmednagar district) pointed that in Ahmednagar district there were twelve Talukas, each having several villages, but there were only 15 dispensaries in the whole of the district, for a population of 988206., Some villages were at a distance of 25 kms. from the nearest dispensary. He urged the Government to open more dispensaries, and if this was not possible, certain specific medicines could be distributed among the villagers, for use at times of need.

---

[28] Ahmednagar, West Khandesh, Nasik, Kanara, Belgaum and Ratnagiri.

[29] *Bombay Legislative Assembly debates,* 2 September 1937.

[30] *Bombay Legislative Assembly debates,* 17 March 1939.

Highlighting the Government's effort towards increasing the number of dispensaries, Dr. M.D.D. Gilder[31] pointed out that the Government had started implementing a new scheme by which the number of rural dispensaries in the province shall be increased from 145 to 595 by the end of 1939 (an increase of 310%), there was also a scheme to subsidize 250 doctors for rural areas.

It was the contention of A.V. Chitre[32] (Ratnagiri North) that the provision allowing private practice by the subordinate Medical officers was defective, as it had degenerated to such an extent that these doctors sent the well to do patients to their private dispensaries, and neglected the poor patients. Replying to his charge Dr. C.J. Ghia (Surat and Rander cities) asserted that private practice among the subordinate medical officers was allowed because of the inadequate salary given to them, and the Government could not afford to increase the salary of these 370 subordinate medical officers in the rolls of Bombay medical service. Dr. M.D.D. Gilder also clarified that the rules were very clear, and the subordinate medical officers were required to be present at the dispensaries during working hours. He promised that action shall be taken against the erring doctors.

---

[31] *Bombay Legislative Assembly debates,* 31 December 1937.

[32] *Bombay Legislative Assembly debates,* 17 March 1939.

In order to improve the village water supply Bombay Government sanctioned Rs.10 lakh in the year 1937 as well as in 1938. Similarly, in the year 1938, the Government made a provision of Rs.27,500 under the Health Unit Organization Scheme.[33] According to Dr. M.D.D. Gilder,[34] after the Congress Ministry took over in Bombay, there was an increase of 14% in the expenditure over medical relief, from 1936-37 to 1939-40.[35]

Despite a considerable erosion of revenues owing to prohibition, the Congress Government in Bombay succeeded in making efforts aimed at improving the access to medical relief for the villagers and also working for raising an infrastructure for sanitation in villages, where the chlorination of wells, construction of draw wells, conversion of step-wells to draw wells, etc., was carried out.

Promotion of the Indigenous Systems of Medicine

While access to modern medicine was severely limited, owing to the near absence of dispensaries and doctors from the villages, majority

---

[33] The aims of this scheme were:

- Inaugurating sound rural health work in all spheres.
- Demonstrating modern practical methods of disease prevention and also create consciousness among the public regarding various public health issues.
- Serving as training ground for public health workers.
- Setting up an organized unit which could be studied and copied by public health and social workers and officials.

[34] *Bombay Legislative Assembly debates,* 17 March 1939.

[35] In 1936-37 the expenditure over Medical relief in Bombay was Rs.41,79,000, and in 1939-40, it increased to Rs.47,63,000.

of the Indian poor had to rely on *Vaids* and *Hakims*. For this reason, the Government, according to R.N. Mandalik[36] (Kolaba district), should spend atleast half its drugs expenditure[37] on 'deshi' medicines. According to him several other provincial Governments[38] had already opened up dispensaries giving Indian medicines, and also established schools and colleges teaching indigenous medicine, and the Government of Bombay should also follow suit. Ahmed Ebrahim Singapor[39] (Surat district) had altogether different reasons for supporting indigenous medicines. According to him, they were sweet in taste and hence were more acceptable to the villagers. Also, the Allopaths only observed the pulse, whereas the indigenous practitioners examined the whole physical system, and thus the latter system was much better.

According to Musaji E. Patel[40] (Broach subdivision), *Vaids* and *Hakims* should be encouraged as they were based in villages and provided cheaper health care. They should be recognized by the government and the Medical council should grant diplomas and certificates to these men.[41] However, for the time being, considering the

---

[36] *Bombay Legislative Assembly debates,* 1 September 1937.

[37] In 1937-38 it was around Rs.86,000.

[38] United Province, Bengal and Madras.

[39] *Bombay Legislative Assembly debates,* 1 September 1937.

[40] *Bombay Legislative Assembly debates,* 2 September 1937.

[41] This was essential in order to control quacks from entering this profession.

financial constraints, the practitioners trained at Unani College, Delhi,[42] and Ayurvedic College at Madras, could be recognized.

On 29 March 1938, Dr. M.D.D. Gilder[43] introduced Bill Number X of 1938, aimed at regulating the qualifications and to provide for the registration of practitioners of the Indian systems of medicine and to amend the law relating to medical practitioners in the province of Bombay. According to the provisions contained in the Bill, a board was to be established for indigenous systems of Medicine, more or less on the lines of Bombay Medical Council. It's function would be to define Ayurvedic and Unani Systems, and the curriculum for schools and colleges teaching them. It would also register the qualified practitioners of Ayurveda and Unani, who had been practising for atleast nine years. The Bill however, did not apply to those area of the presidency where medical relief was unavailable, so that unregistered Vaids and Hakims could practice in such areas.[44]

During the discussion over the bill in the house, two members – R.N. Mandlik and G. Phadke[45] – came with the proposal that Ayurveda and Unani should have two separate boards instead of a common board where both systems were to have an equal representation. They based

---

[42] It was established by Hakim Ajmal Khan.

[43] *Bombay Legislative Assembly debates,* 29 March 1938.

[44] This provision was present in Clause 33 of the Bill.

[45] *Bombay Legislative Assembly debates,* 7 November 1938.

their demands on the fact that the number of practitioners of Ayurveda were far more than that of Unani, and hence, equal representation in a single board was unacceptable to them. However, this communally motivated demand was voted down by the house.

Thus the Congress Ministry fulfilled its promise of promoting indigenous systems of medicine, but not at the expense of scientific method; adequate controls and regulations were provided in Bill Number X of 1938,[46] so that quackery could not be practised in the name of indigenous medicine.

Prohibition

In the budget for 1937-38 the Congress Ministry included a proposal to bring about total prohibition in the Presidency in the next three years. Gandhiji and the Congress had always stood for prohibition, and this was an effort by the Ministry to prove its credentials to the masses. In the first year, implementing prohibition in a few areas meant a loss of around Rs.30 lakh in excise duty to the provincial exchequer.

Several non-Congress members of the Legislative Assembly opposed the policy of prohibition. Sir John Abercrombie[47] (Bombay Chambers of Commerce) opposed prohibition on the grounds that it was

---

[46] The Bill was passed by the House on 8 November 1938.

[47] *Bombay Legislative Assembly debates,* 19 August 1937.

difficult to implement and would cause a loss of a substantial part of provincial revenue.[48] D.J. Ferreira[49] (Thana cum Bombay suburban district) opposed prohibition on the grounds that people should quit drinking voluntarily, otherwise it was very difficult to stop them from drinking. According to Dr. J.A. Collaco[50] (Bombay city) instead of 'spending' Rs.30 lakh on prohibition, the Government should spend this sum on public health and medical relief. K.S. Firodea (Ahmednagar South) however opposed Dr. Collaco's views, asserting that the money Government was losing on account of excise duty on liquor, was the money which was being saved by the public.

In the general budget presented by the Finance Minister[51] for the financial year 1939-40,[52] he proposed to cut the excise revenue by Rs.150 lakh, over and above Rs.30 lakh of the preceeding year. It was proposed that more areas[53] shall be made 'dry' in the coming financial year.

Barring a few exceptions, there was a near consensus among the members of the house about introducing prohibition in the Presidency.

---

[48] The loss would amount to Rs.3.25 crores, which was quite large, considering the fact that the entire budget of the province was Rs.12 Crores.

[49] *Bombay Legislative Assembly debates,* 19 August 1937.

[50] *Bombay Legislative Assembly debates,* 3 September 1939.

[51] Mr. A.B. Latthe

[52] *Bombay Legislative Assembly debates,* 14 February 1939.

[53] North and South Daskroi Talukas, Sholapur, Hubli, Dhulia, Chalisgaon, Jalgaon, Taloda taluqa, Bassein-Thana Creek, Bombay Salsette and Trombay islands.

Benefits of prohibition were obvious – improvement in the general health of the people, reduction in crime especially against women, increase in household savings etc. Despite precarious financial health of the provincial Government, the Congress Ministry sought to bring about total prohibition in Bombay Presidency in a phased manner, thereby showing its commitment towards Gandhian ideals and the Congress policy as a whole.

Birth Control

In 1937 India's population stood at around 35 crores, and it was realized by a few people that efforts should be initiated at regulating the number of births through artificial measures. P.J. Roham[54] (Ahmednagar South) moved a resolution in the house that as birth rate in India was almost double to that of England, artificial contraceptive methods should be introduced in India. However, barring Jamnadas M. Mehta, this resolution was opposed by most of the members[55] of the house, and was finally rejected.

In the present context, the defeat of the above resolution and the arguments presented by the members against birth control measures,

---

[54] *Bombay Legislative Assembly debates,* 10 November 1938.

[55] T.S. Jadhav (Sholapur North-East) recommended abstinence, whereas S.G.H. Jhabvala expressed his faith in Malthusian control. Dr. M.D.D. Gilder expressed that development and population growth go hand in hand, and the average family size of 4.2 was not very large for India.

seems to be really unfortunate. However, one should not miss the fact that the level of understanding of the population problem was still in its infancy in 1930s. The minds of the people were occupied by Malthusian theory, and in fact the figure of 100 crores was unthinkable at that time.

Racialism in the Medical Services

Much has been written about racialism in the Indian Medical Services (IMS) in the 19th and early 20th century, but it is surprising to find the same bias working against the Indians in the late 1930s.

Addressing the house, Dr. J.A. Collaco[56] expressed that till 1928, the Surgeon General was selected by the provincial Government from the IMS officers of the Presidency. However, a circular was issued by the Government of India, taking away this right from the provincial Government. K.F. Nariman called on to oppose this circular, as it amounted to racial discrimination because the Government of India appointed only Europeans for higher posts.[57] S.L. Karandikar[58] (Ratnagiri North) observed that in Poona, there was discrimination between European and Indian nurses with respect to salaries given to them.

---

[56] *Bombay Legislative Assembly debates,* 1 September 1937.

[57] The posts of Chief Medical Officer at Delhi, and Chief Surgeon, Simla, were exclusively reserved for Europeans. In Bombay Presidency, the Civil Surgeonicies of Bombay, Poona, Ahmedabad, Belgaum, Nasik, Dharwar and Sholapur, were reserved for British officers.

[58] *Bombay Legislative Assembly debates,* 2 September 1937.

Certain allowances[59] were the exclusive privilege of the European nurses, even though they were absolutely necessary for Indian nurses also. Besides that, European nurses could continue in service for any length of time.

The Congress Ministry did recognize the problem of racialism in medical services, but as Dr. M.D.D. Gilder pointed out, under the provisions of the section 246 of the Government of India Act, 1935, it was not possible for the provincial Government to secure full autonomy so far as higher medical services were concerned. However, he promised that their government was examining the position of IMS in Bombay with a view to make representation to the higher authorities concerned, in order to limit the number of IMS officers in civil employment in Bombay to the minimum.

HEALTH SURVEY AND DEVELOPMENT COMMITTEE

In October 1943, Government of India appointed the Health Survey and Development Committee under the Chairmanship of Sir Joseph Bhore. It had 24 other members, including several experts from Britain, USA, Australia and USSR. The committee presented its recommendations[60] regarding the improvement of health conditions and

[59] For example, 'dhobi' allowance.

[60] The report of Bhore Committee was presented in 4 volumes – Volume I was titled 'Survey', Vol.II was 'Recommendations', Vol.III was 'Appendices', and Vol.IV was 'Summary'.

health organization in British India, in 1946. It observed that the neglect which the rural population has suffered in the past should be remedied at once and the proposed health scheme should, from the beginning, provide for this section of the community. The curative and preventive health services should function in a co-ordinated manner. Environmental health should be maintained. The committee also suggested that the comprehensive environmental and personal health services provided from public funds should be made available to all, irrespective of their ability to pay for such services. Also the health schemes of the Government should seek active participation and co-operation from the public.

The committee proposed the formation of Ministries of health at the Centre as well as in the provinces. In local areas, there would be a single health authority to be called the District Health Board, and its jurisdiction would extend to the district as a whole.

The committee also suggested several short-term measures in order to cater to the immediate health needs of the people. Health and physical education of the people was also suggested. Early detection and prevention of epidemics, building of basic infrastructure such as village roads and rural communication, maternal and child care, were a few other recommendations of the committee.

To conclude, whatever achievements in the field of public health had been cited by the British Indian Government, they all fell flat on their face, after the Bhore Committee Report was published. The health statistics[61] cited in the first volume of the report, presented a pathetic

61

Name of the Country	Death rate in 1937	Infant Mortality Rate (IMR) in 1937	Life Expectancy at Birth	
			Male	Female
New Zealand	9.1	31	65.04	67.88
Canada	10.2	76	59.32	61.29
USA	11.2	54	59.12	62.67
				Among whites
			47.55	49.51
				Among blacks
Japan	17	106	44.82	46.52
England and Wales	12.4	58	58.74	62.88
British India	22.4	162	26.91	26.56

Province	Average population served by a Medical Institution in 1942	
	Rural	Urban
Sind	22904	7630
NWFP	24053	9359
Panjab	30925	15188
Assam	44562	172962
Bengal	37996	19730
Madras	42672	28496
Orissa	52548	15276
Bombay	34927	17127
Bihar	62744	18630
Central province and Berar	66008	11379
United Province	105626	17668

Annual Death in British India During 1932-41, Excluding Burma

Disease	No. of Deaths	Percentage
Cholera	144924	2.4
Small Pox	69474	1.1
Plague	30932	0.5
Fevers	3622869	58.4
Dysentery and Diarrhoea	261924	4.2
Respiratory Diseases	471802	7.6
Others	1599490	25.8
Total	6201434	100

Number of Beds available per 1000 Population

USA	10.48
England & Wales	7.14
British India	0.24

picture of the state of public health in India. However, despite severe financial constrains and un-cooperative, at times hostile bureaucracy, the congress Government in Bombay, not only by its plans, but also by its deeds, gave an ample indication of the shape of things to come after independence.

CHAPTER III

MEDICAL EDUCATION IN COLONIAL INDIA

The first medical school in India to teach western medicine to Indians was started by the Portuguese at Goa in 1703. It was located at the Royal Hospital founded by Albuquerque in 1510. In 1842 it was converted into a school of medicine and surgery.[1] The Portuguese did bring western medicine into India, but they equally respected the indigenous systems of medicine. According to Jean Baptiste Tavernier, Hindu healing methods were so popular in Goa, that, Portuguese physicians learned therapeutic procedures from Ayurvedic medicine and commonly used them in 1666 in Goan hospitals.[2]

It was the British, and to some extent the French, who introduced western medicine in India on a more systematic basis. Regular hospitals were started by the British in the years, 1664 in Madras, 1670 in Bombay, and 1707 in Calcutta.[3] At this stage native hospital assistants were needed, but there was no systematic training for them.

---

[1] N.H. Keshwani, "Medical Education in India since ancient times", in C.D. O'Malley (ed.), *The History of Medical Education,* California, 1968, p.324.

[2] John M. de Figueiredo, "Ayurvedic Medicine in Goa according to European Sources in 16th and 17th centuries", in William K. Storey (ed.), *Scientific Aspects of European Expansion,* Variorum, 1996, p.232.

[3] Anil Kumar, *Medicine and the Raj: British Medical Policy in India, 1835-1911*, Sage, 1998, p.18.

The earliest definite step to teach medicine was taken in 1812 when a Company Order was issued directing the training of Europeans and Eurasians to form a Sub-Medical Service.[4] The training of Indians was still not institutionalized. It was only after the passage of the Charters Act of 1813,[5] that the British began to pay heed to the demands raised by Indians to start medical education for the natives. The Government in India dominated by the Orientalists, was impressed by the Sanskrit treatises of Ayurvedic medicine. The Medical Board of the company submitted a memorandum before the Government, in order to establish an institution for the natives to impart western as well as indigenous Medical education side by side. Native Medical Institution was thus established in Calcutta in 1822. Surgeon James Jamieson was appointed the first superintendent of the Institute. Twenty Indian students were admitted for three years, with a monthly stipend of Rs.8. After completion of their training they had to serve the company for 15 years. By 1826, the number of students grew upto fifty.[6] Native Medical Institution was soon followed by the establishment of Calcutta Sanskrit College and Calcutta Madrasa, where parallel instructions were carried out in indigenous and

[4] D.G. Crawford, *A History of Indian Medical Service,* Vol.II, London, 1914, p.434.

[5] It set aside a sum of Rs.1 lakh per annum for the education of natives.

[6] R. Jeffery, *Politics of Health,* Berkeley, 1988, pp.74-77.

translated western texts.[7] Influence of colonialism was best seen on medical education when, in 1828 John Tytler was appointed a lecturer in Mathematics and Anatomy in the Sanskrit College; students excelling in anatomy and physiology were subsequently appointed to responsible positions under civil surgeons or in hospitals.[8] In 1932, more teachers were appointed at the Sanskrit College and the Calcutta Madrasa, to teach Ayurveda and Unani to the students. Thus in these institutions, there was a co-existence of both western and indigenous medical education.

The native response to the Native Medical Institution however remained lukewarm due to the Brahmanical taboos on learning anatomy via dissection, and there was also some hesitation among the Indians to learn an altogether new science. As the debate between the Orientalists and the Anglicists reached the boiling point with the eruption of the 'language issue',[9] in October, 1933, Lord William Bentinck, the Governor General, appointed a Committee[10] to enquire and report upon the state of

---

[7] At Native Medical Institution instructions were carried out in vernacular, and dissection was carried out on animals and non humans; students only saw postmortems of humans in hospitals.

[8] W.C.B. Eatwell, *On the Rise and Progress of Rational Medical Education in Bengal,* Calcutta, 1880, pp.15-18.

[9] Whether Indians should be imparted education in English language or in Vernaculars.

[10] The committee was Chaired by Surgeon John Grant, Chief Apothecary to the Company. It's members were J.C. Sutherland, C. Trevelyan, Assistant Surgeon Thomas Spens, Assistant Surgeon M.J. Bramley and Babu Ram Comul Sen. The Committee was named as the Public Instruction Committee.

the Native Medical Institution. In 1834, the committee submitted its report, highlighting several defects in the working of the Institution, and recommended its abolition. These recommendations were accepted and from 1st February 1835, Native Medical Institution, the medical sections of the Sanskrit College and the Calcutta Madrasa were abolished.[11] On the same day, the first Medical College in Calcutta was established, namely the Calcutta Medical College (CMC). CMC was the pioneer institution of the East for a systematic education in western medicine. It was placed under the control of Education Committee, and was open for admission to all classes of people between 14 to 20 years of age, irrespective of class and creed. In the first year, 50 students were admitted, and were required to have a sound knowledge of English besides Bengali or Hindi. The college had to face strong native opposition towards the study of anatomy and dissection. However, Goodeve, who was in charge of teaching anatomy, was able to introduce corpse in anatomy lectures and motivated Madhusudan Gupta to perform the historic dissection in

[11] The resolution that abolished the Native Medical Institution stated "that the Sanskrit College Medical Class, the Medical Class of the Madrasa, and the Native Medical institution be abolished from first proximo, that students of Native Medical Institution who are now capable of passing their final examination shall be appointed Native Doctors, and all other students of that institution be transferred to the native corps of the army, upon their present salaries, to become Native Doctors when represented to be duly qualified by a Committee of medical officers, or, if not found qualified in two years to be discharged".

October 1836.[12] The first batch of successful students passed out in October 1838. The teaching was gradually expanded in the college, and between 1841 and 1912, more chairs were established in the field of Surgery, Clinical Surgery, Botany, Clinical and Practical Botany.[13] The Calcutta Medical College alongside its work on full medical education in accordance with western medical practice, provided training facilities to Indian medical personnel. The requisite supply of these had ceased since the abolition of Native Medical Institution. But the demand for these services continued, especially in the Indian regiments where it became very urgent to educate Native Doctors for employment in Army and Civil stations. This was done by the college in 1838-39.[14] As the demand for Native Doctors continued to increase, in order to fight the growing number of epidemics, Vernacular or Bengali class was started at the CMC in 1851. Qualified students of this class of Native Doctors were called Hospital Apprentices or Vernacular licentiates in Medicine and Surgery (VLMS). They were employed in the subordinate medical services to serve the indigenous population; some were placed under District Magistrates attached to charitable dispensaries and Jail hospitals, while others found employment in stations and hospitals as well as in extended

[12] It is said that on the day Madhusudan performed the dissection, all Brahmins of Calcutta ran away from the city, for fear of getting polluted.

[13] D.G. Crawford, *A History of the Indian Medical Service,* Vol.II, London, 1914, pp.438-40.

[14] *Ibid.*, p.441.

colonial territories. In 1864 the Bengali class was divided into Apothecary and Vernacular licentiate branches.[15] In 1873, Native Apothecary and Vernacular licentiate classes were transferred to a Medical School, due to a great influx of students.[16] Medical schools represented a teaching institution that granted diplomas or certificates to qualified students to fill up subordinate posts in the service of the Government, and the latter conferring degrees after a recognized period of study.

To improve standards of medical education, course of study was extended from three years to four years in 1896 in the Medical Schools, and the entrance qualification was gradually raised to Matriculation in 1904. Finally the schools were transformed from Vernacular to English institutions. In 1914 the State Medical Faculty of Bengal was formed for examining students of these schools for purpose of recognition by the Bengal Council of Medical Registration.[17] The students who passed from these Medical schools, joined the Government service as Sub-assistant Surgeons. In 1904, as per the Indian Universities Act, Universities were empowered to review medical curriculum.

---

[15] Report on Medical Education, 1879.

[16] Temple Medical School was established in 1873.

[17] Calcutta University Commission Report, 1917-19.

The Madras Medical School was founded in February 1835 by Sir Frederick Adam.[18] Originally the school was opened for training subordinates for various kinds of medical work in the army. In 1838 the school was opened for civilians as well. In 1850 the Madras Medical School was converted into the Madras Medical College, and its administration placed under the control of a Medical Board. In 1863 it was affiliated to the Madras University.[19]

Grant[20] Medical College was founded in Bombay in 1845. In 1860 it was affiliated to Bombay University. Three categories of courses were conducted at the college for civil sub-assistant surgeon, the military sub-medical department, and the classes of the native doctors and hospital apprentices. In 1880s the classes of native doctors and hospital apprentices were transferred to the vernacular medical schools.[21]

MEDICAL REGISTRATION

A major assault on indigenous systems of medicine was indicated by the attempts made by British and Indian physicians of western medicine, to secure registration acts in each province, so that no doctor of

---

[18] E.W.C. Bradfield, "Medical Education in India", in Bradfield (ed.), *An Indian Medical Review,* Delhi, 1938, p.70.

[19] *Ibid.*, p.70.

[20] Named after Robert Grant who was the Governor of Bombay.

[21] Anil Kumar, *Medicine and the Raj: British Medical Policy in India, 1835-1911*, Sage, 1998, p.43.

indigenous medicine could be legally recognized to give testimony in legal disputes, to certify illness for workers, or to perform any legally required function. In 1914, Bengal Medical Act was passed.[22] It laid down the qualifications as

> "Every persons who has been trained in a Government Medical College or School in India (Burma) or in a Medical School in India (Burma) not maintained but recognized by the (Provincial Government) for the purpose of this schedule, by notification in the (official gazette) and holds a diploma or certificate, granted by the (Government concerned) or granted by a (Medical School not maintained by any Government) but recognized as aforesaid...."[23]

In the same year, by an order, the Governor-in-Council in Bengal also created the State Medical Faculty, whose responsibilities were confined to arranging the examination of students from colleges and schools which had been approved by the Council of Medical Registration. The State Medical Faculty granted a diploma of membership and a licence, the former corresponding to the Licentiate in Medicine and Surgery (LMS) and the latter to the certificate given by the Government-run Medical schools.[24]

---

[22] The Preamble of this Act read:

> "Whereas it is expedient to provide for the registration of medical practitioners in Bengal, and whereas the sanction of Governor General has been obtained.... it is hereby enacted as follows".
>
> "It purports to provide for a Bengal Medical Council and the qualification it provides for the registration of persons who are to be entered on the register of the provinces is given in section 17".

[23] Bengal Medical Act, 1914.

[24] O.P. Jaggi, *Medical Education and Research,* Delhi, 1979, pp.114-15.

A Bill on similar lines was earlier passed in 1911 for the Bombay Presidency, and was called as the Bombay Medical Act, 1911.[25] The qualifications it recognized, were those of a Doctor; Bachelor and Licentiate of Medicine; Master, Bachelor and Licentiate of Surgery, of the Universities of Bombay, Calcutta, Madras, Allahabad and Lahore; any person trained in a Government Medical College or School who held a diploma or certificate granted by the Government declaring him to be qualified to practice Medicine, Surgery and Midwifery, or to be qualified for the duties of a Military Assistant Surgeon, Hospital Assistant or Sub-Assistant Surgeon.

In the September session of the Imperial Legislative Council, held at Simla, Sir Pardey Lukis[26] introduced the All-India Medical Bill, which was a more comprehensive Bill covering the whole of British India. It became an Act in 1916 and served to restrict the right of duly constituted authorities to issues degrees and diplomas in the western system of medicine and surgery so as to ensure that such degrees and diplomas were not issued to unqualified people. This bill was however restricted

[25] Similar Acts were passed by Madras, Assam, Bihar and Orissa, Central Province, Punjab and United Province, between the years 1914-16. Sind passed its Act in 1940.

[26] He was the Director General of Indian Medical Service (DGIMS)

only to western systems of medicine; Homeopathy, Ayurveda and Unani systems were excluded from the purview of the Bill.[27]

NATIONALIST RESPONSE

The provincial as well as the Al-India Medical Act did not recognize the practitioners of Indian medicine. As a result there was a strong reaction from the indigenous medicinal groups. Names of Dr. Krishna Swami Iyer of Madras and Dr. P.P. Vaid of Bombay[28] were removed from provincial Medical Registers in 1915, for their association with indigenous medicine. Dr. Iyer was threatened by the Council with the perpetual removal of his name from the medical register, if he continued to manage the affairs of Calavala Cunnum Chettiars Free Dispensary at Triplicane. Dr. Vaid was also threatened with similar consequences as he was the Principal of an Ayurvedic College named as Popat Prabhuram College.[29] By means of such pressure tactics, and recognizing only those medical colleges and schools that taught western medicine, the British Indian Government sought to legitimize the status of western medicine. As for the first time in Indian history, State had become the employer of medical practitioners, the development of medicine and its popularization depended a lot upon the policies of the State. The Medical Registration

---

[27] *Imperial Legislative Council debates,* 22 September 1915.

[28] Both of them were trained in western medicine, and hence eligible for registration with the provincial medical registers.

[29] *Report of the All-India Ayurvedic Conference, 1916.*

Acts allowed only registered practitioners (of western medicine only) to enter Government medical services. As a result the indigenous systems lost their charm and started declining. The nationalists however did their best to revive the indigenous systems. The Indian National Congress, at its Nagpur session in 1920, took up the cause of indigenous medicine and passed the following resolution:

> "This conference is of the opinion that having regard to the widely prevalent and generally accepted utility of the Ayurvedic and Unani systems of medicine in India, earnest and definite efforts should be made by the people of his country to further popularize schools, colleges and hospitals for instruction and treatment in accordance with indigenous systems".[30]

In 1921 a National University was established in Bengal and had a Ayurvedic medical wing. Several other Ayurvedic Colleges were also established. Lokmanya Tilak University founded by the nationalists introduced Ayurveda as one of its courses.[31]

INDIAN MEDICAL COUNCIL

General Medical Council of Great Britain (GMC) was started in 1858 to enroll almost every person who was practising in Britain. They were brought on the register of practitioners and were given a representation

---

[30] Indian National Congress, Resolutions, Nagpur Congress.

[31] In 1932, this institution was derecognized, following participation in the civil disobedience movement. In response to this, the nationalists founded another College of Ayurveda at Poona in 1933; it gained state recognition after independence.

on the Medical Council. Persons who were expected to enroll included among others, licentiates of the Society of Apothecaries, London and licentiates of the Apothecaries Hall, Dublin. Also, as per section 42 of the Act, any person who had not the requisite qualifications was allowed to become a member if he satisfied the GMC.[32] In 1886, this Act was amended and power given to GMC to recognize foreign qualifications in British possessions also. In 1905, a further amendment was made and it was provided that in British possession which have got separate Provincial and Central Governments, the Council was entitled to recognize provinces as separate British possessions. Hence the council accepted the principle that persons who were practicing in several provinces of India were to be accepted as persons who were qualified to be registered as Medical practitioners.[33] It was after this that provincial Medical Acts were passed (1911-16). The All India Medical Act of 1916 recognized both medical graduates as well as licentiates.

GMC had full control over medical education in India. In 1907, midwifery course was started in Calcutta Medical College merely at the insistence of GMC. The things however underwent a change after the passage of Government of India Act, 1919, which made public health and

---

[32] O.P. Jaggi, "Medicine in India: Modern Period", part of series, D.P. Chattopadhyaya (ed.), *History of Science, Philosophy and Culture in Indian Civilization,* Oxford University Press, 2000, pp.38-39.

[33] Qazi Muhammad Ahmad Kazmi (Merrut Division: Muhammadan Rural), Speech in the Imperial Legislative Assembly, 26 March 1943.

sanitation a provincial subject.[34] As control over medical colleges and schools slipped from the hands of IMS officer to Indian Ministers in the provinces GMC started its intervention in India. Another reason[35] was that Indian candidates who were entering into the IMS competitions had started to take a very prominent place, and the English candidates were being gradually replaced by the Indians. Hence GMC wanted to strengthen its hold over Indian Universities and thereby restrict the number of graduates passing from them.

In 1920 GMC pointed out the inadequacy of training in midwifery, which was given at some of the medical colleges in India. Defaulting Universities were warned that unless satisfactory arrangements were made, recognition of their degrees would be terminated. Indian universities requested the GMC to grant them some time. In 1922, GMC appointed Sir Norman Walker to inspect Indian Universities. Sir Walker

---

[34] According to K.C. Neogy (Dacca Division: Non-Mohammadan rural) (Imperial Legislative Assembly, 12 April 1933, at the time of Mont-Ford reforms, Function Committee (also called as Feetham Committee, after its Chairman) was appointed, and on its recommendations Devolution Rules were drawn up. However, its recommendations were opposed by the Government of India (found in fourth dispatch of the Government, dated 16 April 1919) on the grounds that, it was not safe to transfer the control of technical and medical education to Indian Ministers; control of not only medical, but also legal, engineering and technical and industrial colleges and schools in India could not be entrusted to what they called 'inexperienced hands'. Government of India also pointed out that political influence might play a great part in regard to these various matter with disastrous effect on the efficiency of education in India. However, Feetham Committee recommendations were accepted.

[35] Qazi Muhammad Ahmad Kazmi (Meerut Division: Mohammadan Rural), Speech in the Imperial Legislative Assembly, 26 March 1943.

pointed out several shortcomings in the course structure and infrastructure of the universities. As no machinery existed in India at that time, for the inspection of universities and their medical examination, it was proposed that the Government of India should appoint a special inspector of universities. It was agreed to by the Government of India and all Universities, except Calcutta University. As a result, medical degrees of Calcutta University were derecognized in 1924; they were granted recognition only in 1928, when Calcutta University agreed for an inspection.[36]

In 1926, Sir Walker again visited India, and noted his findings and suggestions in a report. He suggested the setting up of a Medical Council in India, and a Commissioner of Medical qualifications and standards,[37] within a certain time frame, expiry of which was to invite derecognition. As the period of temporary recognition was fast drawing to a close, Government of India proposed that a Board consisting of representatives of Government of India and of medical faculties of universities be set up as a temporary measure for inspection of medical examination. This proposal was however rejected by the GMC and in February 1930 it decided to derecognize Indian Medical degrees. Committee of

---

[36] R. Jeffery, "Recognizing India's Doctors: The establishment of Medical Dependency, 1918-39", *Modern Asian Studies,* 13(1979), pp.301-15.

[37] It was to be appointed immediately on a temporary basis.

Management of Conjoint Examining Board in England decided that if by 1st June 1933, Indian Medical Council Bill was not passed into a law and approved by the GMC, existing recognition of Indian Universities by that Board shall also cease.[38]

Though a bill for the formation of an All-India Medical Council had been introduced in the Imperial legislative Assembly as well as the Council of State at earlier occasions[39] also, but on 13 February 1933, Government introduced the Indian Medical Council Bill. Prior to the introduction of Indian Medical Council Bill, the government in 1930 had invited representative of provinces[40] and of universities to meet in a conference at Simla.[41] It was decided to set up in India a body which would endeavour to co-ordinate standards of medical education of graduates.[42]

---

[38] R. Jeffery, *op.cit.*, n.36, pp.315-20.

[39] In 1925, Dr. Lohokare had introduced a bill in the Legislative Assembly for the establishment of an All India Medical Council and an All India Medical Register. Simultaneously an identical bill was introduced in the Council of State by Dr. U. Rama Rau.

[40] Public Health and Sanitation was a transferred subject as per the Government of India Act, 1919.

[41] In this Conference, no opportunity was given to the independent medical men or to different Medical Association of India to be represented. Majority of members of Medical Faculties of Universities were either IMS officers or Government servants. Besides representatives of the government, there were – one Executive Councillor, four Ministers, three Surgeon Generals, five Inspector Generals and seven representatives of Indian Medical Faculties.

[42] G.S. Bajpai (Secretary, Department of Education, Health and Lands), Imperial Legislative Assembly, 13 February 1933.

While introducing the bill in the Legislative Assembly, Mr. G.S. Bajpai cited derecognition by the GMC to be the most important reason for brining about this Bill. According to him, derecognition would create two main problems, i.e. Indian medical graduates, who graduated after the withdrawal of recognition, might have difficulties in the pursuit of post-graduate work in England; also, in countries such as Malaya and Ceylon and other places, it would be difficult for Indian graduates to find employment.[43]

The Bill provided for the establishment of an Indian Medical Council, which was to provide a medical register only for the medical graduates, and not the licentiates. This was in complete contrast to GMC, which provided a register to medical graduates as well as LSA and LRCP courses which were not regular degrees of Universities.[44] There were around 20,000 licentiates in Indian at that time, constituting more than 90% of the medical practitioners in the country. This Bill therefore was of no utility as far as the control over medical qualifications was concerned, because it catered to a small minority of medical practitioners in India. The argument that derecognition would harm the interest of medical graduates wishing to go to England for post graduation work or of those already practicing in England, was totally hollow. Firstly, very few Indian

[43] *Ibid.*

[44] T.N. Ramakrishan Reddi (Madras ceded Districts and Chittor: Non-Muhammadan rural), Imperial Legislative Assembly, 14 February 1933.

graduates went abroad for post graduation, and those wishing to go abroad need not necessarily go to England; secondly, many of the medical graduates practising in England had already taken up western degrees, and the issue of their disqualification did not arise.[45]

That, the Indian Medical Council Bill was entirely dictated by the GMC was clear from the fact that Schedule II of the Act gave qualifications of foreign Universities or places such as, College of Physicians and Surgeons of the Province of Alberta, Canada; LMS of Nova Scotia Provincial Medical board; LMS of Newfoundland Medical Board, as sufficient for one's registration in India as a qualified Medical practitioner.[46] The licentiates of Indian medical schools were on the other hand entirely left out by this Bill.

The composition of the Indian Medical Council as suggested by this bill, ensured that the Council was completely dominated by the IMS officers. Out of the 28 member in the Medical Council, 12 were to be nominated by the Government and were to be IMS officers; there would be 8 representatives from the Universities.[47] Thus out of the 28 members,

---

[45] *Ibid.*

[46] It was only in 1946 that these degrees were derecognized in India.

[47] Each University was not to have a representation, but each province was to be a unit for the purpose of sending representatives, and this work was to be done by the Medical faculties. There were about 125 members in total in all the Medical Faculties of provinces. These 125 members were to select 8 representatives to the Medical council. Out of these 125 members, nearly three-fourth were gazetted officers of the Government of India, of which again a majority were IMS officers.

20 would be the representatives of the Government. Indian Medical council was therefore to be a Government body that did not represent[48] the medical profession at all. In addition, the President of the council was also to be nominated by the Governor General in Council.

Most of the Indian members in the Legislative Assembly opposed the Bill and suggested that the Medical Council should be made more representative and should include the licentiates as well. Official majority however made sure that the bill was passed by both the houses. On 21 November 1933, the bill received the assent of the Governor General and became an Act.[49]

Medical Council was constituted in February, 1934, and Major General Sprawson, IMS, was nominated the first President. Major General E.W.C. Bradfield was nominated President after the retirement of Major General Sprawson. On the expiry of first five years, the presidents were elected.[50] The Council took up the task of inspecting the standards of medical examination and the facilities for training available at associated hospitals. The Council also took lead in abolishing some of the Medical

---

[48] GMC on the other hand was a representative body. It had 38 members in total. Out of these 38, only 5 member were nominated by the Government, 27 members were representatives of the Universities in Britain and of various medical corporations, remaining 6 were directly elected by the members of medical profession as a whole.

[49] Indian degrees were recognized by the GMC soon after.

[50] E.W.C. Bradfield was the first elected President, followed by B.C. Roy and A.S. Erulkar.

Schools and converting the rest to Medical Colleges, in order to bring about uniformity in Medical education in India. The existing licentiates were provided opportunity to obtain University degrees, by undergoing a further training of 12-24 months.[51]

MEDICAL EDUCATION FOR WOMEN

Medical care for women had mainly been looked after by the traditional midwives in India. The first organized work of teaching women in western medicine was taken up in Madras Presidency. This was initiated by the efforts of Dr. T. Balfour and Mrs. Scharleb. It was mainly due to their efforts that women were granted permission to get admission into the Madras Medical College.[52] After this modest beginning, a bigger scheme was started in 1885, with the formation of the Countess of Dufferin Fund.[53] This fund was devoted mainly to train Indian women as doctors and to give grants to women hospitals in different parts of the country. The Fund was managed by a central committee meeting at Calcutta and Simla, of which the Viceroy's wife was the President. Each province had its own branch, similarly organized, which undertook to achieve the aims and objectives of the association and were

---

[51] O.P. Jaggi, *Medical Education and Research,* Delhi, 1979, pp.125-27.

[52] In 1875, four students, including Mrs. Scharlieb were admitted; all of them were of European or Anglo-Indian origin.

[53] Formally called as the National Association for Supplying Female Medical Aid to the women of India.

responsible for collecting their own funds.[54] Women Medical Service was started in 1915 and was supported by a subsidy paid by the government to the Countess of Dufferin Fund. Women graduates of Indian Universities after three years service in women's hospitals were granted scholarships to go to England for post-graduation, thereby making them eligible to become member of Women's Medical Service. Doctors of Women's Medical Service trained students at Lady Hardinge Medical College, Delhi, as well as in health schools; they were also involved in training of midwives.[55]

The Countess of Dufferin Fund certainly did a commendable work in the field of medical education and training for women, but the scope of its activities was limited due to the shortage of funds, lack of Government support and non-professional approach in its management.

Medical education in the initial phase in Colonial India started with the peaceful co-existence of both western and indigenous systems of medicine. However, with the rapid advancement of western medicine in Europe in the nineteenth century, and the increasing influence of the Anglicists, the government in India started promoting western medical education. As State employment closed for the practitioners of indigenous medicine, it underwent a period of decline. The nationalists did take up

[54] O.P. Jaggi, op.cit., n.32, pp.64-65.

[55] *Hindustan Times,* 22 March, 1927.

the cause of indigenous medicine and were successful to an extent, but they lacked the kind of resources needed for rejuvenating Ayurveda and Unani. The manner in which GMC dictated terms to the Indian Universities by derecognzing Indian Medical degrees clearly shows how vested interests operated in the field of medical education in India. IMS had a domineering influence in all fields of public health and the Government in all its legislations (Indian Council Bill, for example) made sure that the interests of the IMS were preserved.

CONCLUSION

The British were here in India to rule, and to rule with a firm hand they needed a healthy army and an officer cadre, most of whom were of European stock. Public health and sanitation therefore arose from the cantonments, and entered the civil lines, completely by passing the native towns and countryside. There has been an attempt recently to whitewash the colonial neglect of public health and sanitation in India, by trying to highlight that not only Indians, but also the British suffered in the 'unhealthy' environs of the tropics.[1] The Europeans certainly did not suffer as much the Indians did due to neglect in public health and sanitation. Access to medical facilities, proper sanitation in civil lines, proper nutrition and a healthy life style ensured that the Europeans managed well in India. The medical services in India, both covenanted as well as uncovenanted, were organized mainly to cater to the medical needs of the army. The IMS officers were employed on civil duty only when their services were not needed by the army. The IMS was opened for Indians in 1855 when for the first time competitive examination was introduced for recruitment into the IMS; the examination was held in England. Till 1905 only 5% of the IMS officers were Indians. The IMS was

[1] David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth Century India,* Cambridge University Press, 1993.

completely dominated by the Europeans, and most of the top posts in civilian health department were reserved for the IMS officers. It was during the first world War that an acute shortage of IMS officers was felt in the civilian health departments, as most of the IMS officers constituting the War reserve were reverted back to the army. The demand for the constitution of a separate Civil Medical Service gained momentum during the first World War. Under the growing pressure the Government in order to ward off allegations of neglecting civilian public health,[2] appointed the Verney Lovett Committee in order to study the feasibility of constituting a purely civil medical service. The committee, dominated as it was by Europeans and IMS officers, recommended the formation of an Indian Medical Corps, that was different only in name from the IMS. The state of utter neglect in which public health and sanitation in India lay could not have been made more clear than by the Bhore Committee report, 1946. It was a vindication of the nationalists' stand that all that was done by the Government in the field of public health was confined to the army and the civil lines.

The nationalists had a clear vision about the public health and sanitary needs of the Indians. The National Planning Committee document is only one such example of the clarity of thought and depth of

[2] During the World War the Government could not afford to outrightly reject the demands of the nationalists because it needed their help in its' war effort.

understanding exhibited by the Congress with regard to several important issues. The Congress ministries were in power in the provinces for only about two years (1937-39), but the results they achieved in this short span, were great, if not spectacular. It clearly showed that in order to improve the public health facilities available to the common masses, an Indian Government was needed, and not a Government dominated by European who had come to India to rule and not to serve.

Though starting with a deep sense of respect for the indigenous system of medicine, the medical policy of the British government soon underwent a radical shift, and it started promoting western medicine in India after 1835. The provincial Medical Acts passed between 1912-16 made sure that the practitioners of indigenous medicine could not be registered, nor could they be employed by the Government. Lack of support from the Government in an era when State for the first time in the history of India had become a provider of public health facilities, made sure that indigenous systems of medicine undergo a gradual demise.

The manner in which the GMC coerced the Indian universities to surrender their autonomy and the Indian Government merely facilitating this bullying by the GMC, makes it absolutely clear that India was

nothing else but a colony of the British. That GMC was the brain behind drafting the Indian Medical Council Bill (it was full of shortcomings and was opposed by most of the non official Indians in the Imperial Legislative Assembly) is made obvious from the reading of a letter[3] from India office dated 17 December 1931, which states

> "I am directed by the Secretary of State for India in Council to transmit, for the information of Government of India, a copy of the correspondence with GMC on the subject of the revised Draft Bill for the establishment of an All India Medical Council. The Secretary of State has no doubt... that the revised Draft Bill has now been accepted by the GMC".

The Indian Medical Council was established in 1934 and was completely dominated by Government nominees who were mostly IMS officers. Thus it is clear that medicine was certainly a tool for colonization and it continued to remain so till the last days of the British Empire in India.

[3] Qazi Muhammad Ahmad Kazmi (Meerut Division: Muhammadan Rural), Imperial Legislative Assembly, 26 March 1943.

BIBLIOGRAPHY

PRIMARY SOURCES

Amrita Bazar Patrika, 1914-47

Annual Report of the All India Institute of Hygiene and Public Health, Calcutta, 1934.

Annual Report of the All India Institute of Hygiene and Public Health, Calcutta, 1935.

Annual Report of the Public Health Commissioner with the Government of India, New Delhi, 1927, 1936.

Annual Reports of the National Association for Supplying Female Medical Aid to Women of India (Countess of Dufferin Fund), 1886, 1889, 1891, 1894, 1903-04, 1945, 1946, 1947).

Bhore Committee Report, 1946

Bombay Chronicle, 1914-47

Bombay Legislative Assembly debates, 1937-39

Civil Medical Code: Bombay Government, Bombay, 1914.

Drugs Indigenous Committee, Second Report, Simla, 1909.

Hindustan Times, 1924-47

Imperial Legislative Assembly debates, 1924-47

Imperial Legislative Council debates, 1914-19

Improvement in conditions of child birth in India, Calcutta, 1918.

Indian Sanitary Policy (Resolution issued by Governor General in Council on 23 May 1914), Delhi, 1914.

International Commission of Death, Paris, 1929.

Lee Commission Report, 1924.

Madras Plague Regulations and Rules, 1899, 1902, 1909-10, Madras

Manual of Vital Statistics and Public Health, Bombay, 1922.

Medicine-Organizations and Societies – Medical Services, Madras Public Health. Review of the Public Health Reports, Local Self Government, Madras, 1920.

National Planning Committee Report, 1940.

Plague Pamphlets, Delhi, 1899.

Punjab Plague: Handbook for the Guidance of Officers in Matters connected with Plague, Lahore, 1901.

Report on the Indian Constitutional Reforms, Calcutta, 1918.

Verney Lovett Commission Report, 1919.

SECONDARY SOURCES

Books and Articles

Arnold, D. *Coloning the Body: State Medicine and Epidemic Disease in Nineteenth Century India,* Delhi, 1993.

Bala, P., *Imperialism and Medicine in Bengal: A Socio-Historical Perspective,* New Delhi, 1991.

Banerjee, A.C., *The Constitutional History of India, Vol.II,* Delhi, 1978.

Belfour, M. and R. Young, *The Work of Medical Women in India,* London, 1929.

Bradfield, E.W.C., (ed.), *An Indian Medical Review,* Delhi, 1938.

Brass, Paul R., "The Politics of Ayurvedic Education: A Case Study of Revivalism and Modernization in India", in S.H. Rudolph and L.I. Rudolph (eds.), *Education and Politics in India,* Delhi, 1972.

Chopra, A.N., *IMS – A Handbook,* Delhi, 1939.

Chopra, P.N. (ed.), *Towards Freedom,* Vol.I, ICHR, 1985.

Crawford, D.G., *A History of the Indian Medical Service,* 2 vols., London, 1913-14.

Curtin, P.D., *Death by Migration : Europe Encounter with the Tropical World in the Nineteenth Century,* Cambridge, 1989.

Dharamvir, N.R., *Public Health in India,* Delhi, 1934.

Dutt, R.P., *India Today,* London, 1940.

Eatwell, W.C.B., *On the Rise and Progress of Rational Medical Education in Bengal,* Calcutta, 1860.

Gracias, F.D.S., *Health and Hygiene in Colonial Goa (1510-1961),* Delhi, 1994.

Harrison, M. and B. Pati (eds.), *Health, Medicine and Empire, Perspectives on Colonial India,* New Delhi, 2001.

Harrison, M., "Quarantine, Pilgrimage and Colonial Trade: India 1866-1900", *IESHR,* No.29, 1992.

_____,*Public Health in British India: Anglo-Indian Preventive Medicine, 1859-1914,* Cambridge, 1994.

Headrick, D.R., *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century,* Oxford, 1988.

Hehir, P., *The Medical Profession in India,* London, 1923.

Jaggi, O.P., *Ayurveda: Indian System of Medicine,* Vol.4, Delhi, 1981.

_____, *Medical Education and Research,* Vol.13, Delhi, 1979.

_____, *Medicine in India: Modern Period,* Vol.IX, Part I, Oxford, 2000.

_____, *Public Health and its Administration,* Vol.14, Delhi, 1979.

Keshwani, N.H., "Medical Education in India Since Ancient times" in C.D. O'Malley (ed.), *The History of Medical Education,* California, 1968.

Klinoubol, K.K., *Public Health Development and Administration: A Case study of a Developing Economy,* New Delhi, 1989.

Kumar, A., *Medicine and the Raj, British Medical Policy in India, 1835-1911,* Delhi, 1998.

Kumar, D., (ed.), *Science and Empire, Essays in Indian Context (1700-1947),* Delhi, 1991.

Kumar, D., *Science and the Raj, 1857-1905,* Oxford, 1995.

Macleod, K., *History of the Medical Schools of Bengal,* Calcutta, 1872.

Macleod, R. and L. Milton, (eds.), *Disease, Medicine and Empire: Perspectives of Western Medicine and the Experience of European Expansion,* London, 1988.

Megaw, J., *Some Points Connected with Medical Administration in India,* Delhi, 1988.

Nader, C. and A.B. Zahlan (eds.), *Science and Technology in Developing Countries,* Cambridge, 1969.

Pearson, M.N., *Towards Superiority: European and Indian Medicine, 1500-1700,* Minneapolis, 1989.

Ramasubban, R., "Public Health in British India, 1857-1900", in R. Macleod and L. Milton, (eds.), *Disease, Medicine and Empire: Perspective on Western Medicine and the Experience of European Expansion,* London, 1988.

Ray, K., *History of Public Health, Colonial Bengal 1921-1947,* Calcutta, 1998.

Rosenberg, C.E., *Explaining epidemics and other studies in the history of medicine,* Cambridge, 1992.

Rotberg, R.I. (ed.), *Health and Disease in Human History,* MIT, 2000.

Said, E.W., Culture and Imperilism, London, 1993.

_____, *Orientalism,* London, 1978.

Sarkar, S., *Modern India, Madras, 1983*

Seton and Gould, *Indian Medical Service,* London, 1912.

Shah, K.T., *Provincial Autonomy (Under the Government of India Act, 1935)*, Bombay, 1937.

Sinha, S., *Public Health Policy and the Indian Public, Bengal 1850-1920*, Calcutta, 1998.

Storey, W.K. (ed.), *Scientific Aspects of European Expansion*, London, 1996.

Turner, J.A., *Sanitation in India*, Bombay, 1914.

Udwadia, F.E., *Man and Medicine, A History*, Oxford, 2000.

Williams, L.F.R., India in 1917-18, Calcutta, 1918.

_____, India in 1918-19, Calcutta, 1919.

_____, India in 1919-20, Calcutta, 1920.

_____, India in 1920-21, Calcutta, 1921.

_____, India in 1921-22, Calcutta, 1922.

_____, India in 1922-23, Calcutta, 1923.

_____, India in 1923-24, Calcutta, 1924.

_____, India in 1924-25, Calcutta, 1925.

_____, India in 1925-26, Calcutta, 1926.