

## Medical History

### Epistemological Principles of Medicine in India — A Historical Overview

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Medicine is said to be a miniature history of any civilization in the world. In fact, each and every form of human intellectual pursuit over the long journey of mankind, be it in the field of Philosophy, Art, Literature, Science, Politics or Trade and Commerce, can epistemologically be linked to the contemporary development of Medicine and its prevalent theories. The present development of Surgery would not have taken place, had there not been the Barber surgeons in the battlefield inventing the different methods of successful repair of wounds or the safer methods of limb amputations while treating the soldiers. Neither the development of Pharmacology would have taken place, had there not been the ancient merchants transporting the different herbs and medicinal products from one continent to the other, sailing their ships across the turbulent seas or driving their caravans across the deadly deserts for centuries together. On the other hand, medicine in this 21<sup>st</sup> century would not have attained the status of a scientific discipline and would have remained a slave serving under the authority of religion, had there not been the pathfinders like Bacon and Descartes shaping the minds of the medical thinkers of Medieval Europe in particular and those of the World forever.

Indian Medicine is no exception to this rule. For time immemorial, our intelligent ancestors have devoted their life in finding out the way to alleviate the suffering of mankind from Disease, Infirmary and Death and the way to achieve the salvation towards Immortality, both from the spiritual as well as from the practical point of view. The first effort has resulted in the enormous treasure of Indian Philosophy and the emergence of the legendary personalities like Kapil, Kanada, Gautama, Patanjali and Buddha and the second effort has resulted in the emergence of the rich treasure of Ayurveda and personalities like Caraka, Sushruta, Vagbhata Madhava and Cakrapani. As far as the institutionalization of medical education is concerned, it was Taxilla where the first medical institution in India was known to function under the auspices of Atreya Punarvasu in c. 5<sup>th</sup> century BC.<sup>1,2</sup>

In the present article, effort has been made to delineate a historiographic account of the epistemological developments of Indian Medicine over the ages.

[1] **Empirical Stage** — As far as our knowledge go, Man arrived in this world about 80,000 – 100,000 years ago. Unfortunately, the first 95,000 years of this period is devoid of any written history, and there exist considerable lack of continuity is the

intellectual achievements of mankind.<sup>4</sup> The rudimentary sources of history of medicine in this period include the cave paintings, palaeontological specimens, and the timeless oral traditions of numerous tribes all over the world and the age old practices and rituals of the tribal folk, in particular, their birth, fertility and death rituals.

Approximately 10-12 thousand years ago, Man discovered the marvel of agriculture which gave him the freedom from the nomadic life of the hunter-gatherer and ensured the constant and adequate supply of food for his primitive community. At the same time, there came important changes in the social life of Man. This was because of the concept of the 'Division of labor' and the 'Right over the Land'.

Important changes came into the medical practice of the community. So long, everybody of the clan was conversant about the identification and usage of the natural sources of medicine like the herbs and the minerals. But, due the increasing pre-occupation of the members of the society with the agricultural and the ancillary activities, the job of medical service to the community was entrusted to a few, having an aptitude for the same and in this way the birth of the primitive 'Medical Men' took place.<sup>3</sup>

At this stage, the medical knowledge was empirical in character and limited in volume. This is the first stage of medicine and may be called the '**Stage of Empirical Medicine**' in the historical context. This is still a living tradition even in this 21<sup>st</sup> century and prevalent among the common people all over the world, irrespective of their origin, education, culture and the scientific development of the country.

The training of the Doctors were marked by the empirical methods of learning about the natural healthcare among the numerous indigenous communities spread over a large area, from time immemorial. This is, indeed, a living tradition among the tribal population of the country and serves a large section of our population as far as their healthcare needs are concerned.

[2] **Religious stage (Stage of immature rationality)** — Gradually, with the advent of time, the village based primitive community entered into the era of surplus production and the resultant trade exchanges gave rise to urbanization and the establishment of towns, cities and trade-centers. The increasing communication among people resulted in the enormous increase in the volume of knowledge in every sphere of life, including medicine and gradually, the corpus of knowledge became unmanageable. With the discovery of the written language, the problem of record and documentation could be solved to a large extent, but the enormous amount of

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discreet information made the affairs extremely complicated and confusing, thereby necessitating an epistemological methodology for dealing with this ever-increasing huge corpus of information. To start with, this necessity of rationalization was provided by the prevalent religious schools of the society. There are ample evidences in every system of medicine in different civilizations starting from the Egyptians in 6000 BC down to this 21<sup>st</sup> century when Gods and Deities are worshipped and prayers are chanted to ward off the outbreak of diseases. In our country, one can find such references in the texts of 'Atharva Veda'.<sup>4</sup> This is the second stage of medicine known as the '**Stage of Religious Medicine**'.

[3] **Philosophical stage (Stage of mature rationality)** — As the civilization progressed, the rational mind of the intelligent men tried to get rid of the clutches of the religion and forwarded secular theories for the explanation of the natural events. Thus the era of 'Philosophy' began.

In India, 'Theories of knowledge' as a whole reached a fantastic height with the rich culture of the different schools of classical 'Philosophy' like Samkhya, Nyaya, Vaisheshika, Yoga, Mimangsha, Vedanta and atheists like the Buddhism and the Jainism.<sup>3</sup> As a result of this, medical information gathered so far, started getting systematized and around 1000-600 BC, the system of medicine called 'Ayurveda' could attain the status of an organized system. The practice of 'Ayurveda' and its potential reached new height during the Buddhist period. It was during this period, that the famous compilation of medical texts, the 'Charaka Samhita' and the 'Sushruta Samhita' saw the light of the day for the first time. The theories and methodologies of 'Ayurveda' were strictly confined within the philosophical premises of the prevalent period and it took the shape of a 'Holistic discipline' under the auspices of legendary scholars like Jivaka Komaravachcha, Brddha Sushruta and the masters of the schools like 'Charakas' and the 'Sushrutas'. When compared to the contemporary systems of medicine in Europe like the Greek, Roman or the Jewish Medicine, the 'Ayurveda' appears to be quite advanced and mature in its theory as well as in its approach.<sup>1</sup> This stage may aptly be designated as the '**Stage of Philosophical Medicine**'.

In the later period, the development of the material sciences came to a standstill in India due to the prevailing social system and the casteism. This area has been extensively dealt by Acharya P. C. Ray in his book titled 'History of Hindu Chemistry' and little is left to any further comment.

Since c1500 BC down to the present days, the traditional schools of the indigenous medical systems of the country eg, Ayurveda, Unani & Tibbi, Siddha etc. followed the classical 'Gurukul' system of medical education which has been replaced by the western model of institutional education only in the recent past to a considerable extent. However, there are a large number of indigenous medical schools and 'Ashramas' in the country who are following the traditional methods of medical education for the young learners of the 'Indigenous Medical systems'.

Comparing with Europe, after the fall of the Roman Empire, the 'Dark period' prevailed for about fourteen hundred years, after

which, the darkness of the medieval barbarianism passed off and the sun of the 'Renaissance' made its appearance. During the period of darkness, it was the Arabian world, which kindled the light of rational spirit of knowledge in its cradle and made invaluable contributions in the field of various intellectual pursuits, including the 'Art of Medicine'.<sup>7</sup> In fact, the modern civilization owes the concept of 'Modern hospital' to the Arabic medical scholars.<sup>6</sup>

[4] **Scientific stage** — With the advent of 'Renaissance' in Europe, the spirit of 'Scientific enquiry', as it was in the ancient Greek Civilization, within the European sense of its meaning, achieved the supreme position in any sort of intellectual pursuit and stark 'Objectivity' became the sole criteria for evaluating any intellectual endeavor before it claims any worth for consideration.<sup>7</sup> Medicine was no exception to this rule. Gradually, the Human face of medicine disappeared and it increasingly aligned itself with the material sciences like the Physics and Chemistry. According to Dr. Bernard Lown, the co-recipient of Nobel Peace Prize (1985) - "the practice of medicine has in increasingly shifted to a scientific paradigm and the patient transformed into a biomedical model..... a sick person is merely a repository of malfunctioning organs or deranged regulatory systems that respond to some technical fix."<sup>8</sup> Medicine, in this way entered into the fourth stage of development called '**The Stage of Scientific Medicine**'.

DIFFERENT STAGES OF EVOLUTION OF MEDICINE
■ Collection of Empirical Information - Clans & Tribes in the Rural level
■ Compilation- With the advent of Trade & Urbanization
■ Immature Rationalization- In relation with Religion & Traditional Causality
■ Mature Rationalization- Approach by the different schools of Philosophy
■ Scientific Rationalization- Introduction of Physics & Chemistry with Modern Technology
■ Stage of Holistic Idealism.... Yet to arrive!

**Advent of Western Medicine in India** — The advent of western medical healthcare delivery system and the related education in India during the colonial rule should be viewed in the light of the practical compulsion of the foreign rulers. It is evident from the literature that they were actually concerned with the health of their soldiers and officers lest they should fall ill and eventually

die in discharging the duties of the unpleasant compulsion of ruling the God-forsaken land of India, full of malaria, cholera, kala-azar and various kinds of known and unknown pestilences. The native subjects of the land were entirely dependant on the age-old traditional systems of medicine.

The credit of introduction of the western medicine in India does not go to the British, but it was the Portuguese rulers of Goa who made an appeal to their superiors abroad for establishment of a hospital for the treatment of their people as early as in 1687 AD. As a result of this, a hospital was built in Panveelim, Goa and in 1703 AD it was converted to a medical school for imparting medical education to the Indian and the Anglo-Indian students. In 1801 AD, Miranda and Almeida, two renowned teachers of the school, started a regular 3 years course which was extended to 4 years in 1821 AD. The Goa medical school was founded in 1842 AD in Panjim and the 5 years regular course was started in the year of 1847 AD.<sup>9</sup>

In the eastern part of India, the British rulers were compelled to establish a system of training the Anglo-Indian boys in the Sub-medical service as early as in 15<sup>th</sup> June, 1812 AD. But, this arrangement was not sufficient considering the load of the patients and the demand of the society. On the 9<sup>th</sup> may, 1822 the Government order was passed for the establishment of an appropriate board of studies for the purpose of training the native doctors. Finally, on 21<sup>st</sup> June, 1822 AD, 20 Indian students were admitted to the 'Native Medical Institution' [NMI] under Surgeon Jamieson as its first Superintendent. After the death of Jamieson, in June 1823 AD, The famous Dr. Bretton took the charge of the institution.<sup>10</sup> This is an important phase, often overlooked by the historians, characterized by the systematic and synthetic approach to formulate an 'Integrated' system of healthcare and medical education, taking into consideration the huge treasure of the traditional indigenous systems of medicine in India and the European medical systems on the other side, for this part of the globe. This phase can be identified as the '**Intermediary phase**'. The 'Native Medical School', established by the British rulers and the pioneering efforts of Jamieson, Bretton and Tytler in this direction, marked the beginning of a new concept in the medical education of India but unfortunately, their efforts faced a premature death due to the active and well-contrived interference of Macaulay and Trevelyan.<sup>10,11</sup> The experiment initiated by Bretton and Tytler has remained a long-cherished desideratum of the medical education in India, even in this 21<sup>st</sup> century. The strong sentiment of the people of India about the indigenous systems of medicine has been amply reflected in the 5 Year plans since independence and even in the recent 11<sup>th</sup> plan. Provisions have been made for the indigenous systems under the aegis of 'AYUSH'. Moreover, the increasing interest of the medical-scientific community of the world in these indigenous systems and their acceptability in the healthcare programs have made the situation almost imperative for the Indian medical community to consider the whole affair with due seriousness and a scientific, rational attitude.

The most important problem of imparting 'Medical education' to

the Indian students at that time was the acute dearth of medical text books. Moreover, the knowledge of English was so rudimentary among the Indian youths at that time that it was not possible for them to comprehend the western medical texts in original. Dr. Bretton took the initiative and translated a large number of medical and scientific text books in vernacular. He also insisted that the students of the NMI should be proficient in the general education and therefore, the students were sent to the Sanskrit College and the Calcutta Madrassa. Pandit Madhusudan Gupta, the famous pioneer of 'Anatomical dissection' in India, translated Hooper's Anatomy for this purpose. The students used to receive their clinical training in the Native Hospital and the total duration of the course was 3 years. Dr. Bretton breathed his last in Calcutta in the year 1830 AD. He was succeeded by another famous teacher and pioneer in the medical education in India in that nascent stage, Dr. Tytler who strived a lot to give it a definite shape. Both of these pioneers, Dr. Bretton and Dr. Tytler suggested that medical teaching be given in vernacular. They also forwarded their logic to develop the system of western medicine in India side by side with the enforcement of the traditional systems of medicine of this land. In fact, they were the pioneers who tried to organize a truly synthetic system of healthcare and medical education in India taking materials from both the European and the Indian systems of medicine.<sup>10,11</sup>

In 1833 AD, Governor General Lord Bentinck made a commission to assess the functions of the NMI and they made adverse comments about the standard of students and the standard of education imparted in NMI in their report on 20<sup>th</sup> October, 1834 AD. This is a landmark report in the history of medical education in India as it marked the clear watershed between the synthetic, integrated system of medical tradition which was envisaged by Bretton and Tytler for the Indian people and the imperial, European system of medicine which was awaiting its hurried entry into the newly found native market in India with an immense potential for the European economy. There are ample historical evidences to support that the advent of western medicine in India was more an economic compulsion of the imperial Europe than an endeavor of pure philanthropic benevolence. The indigenous systems of medicine in India had to be sacrificed to the altar of the imperial, colonial interests of Europe. In this connection, the role of the Anglicists like Macaulay and Sir Charles Trevelyan was instrumental.<sup>12</sup>

At last, by the General Order no. 28 dated 28<sup>th</sup> January, 1835 AD, the NMI was abolished along with the study of medicine in the Sanskrit College and Calcutta Madrassah, and the 'Medical College, Bengal' started its journey with an immense potential for the future and as the pioneer institution for the advent of western medical education in India. Surgeon Major Bramley became the first superintendent of the college. Within a short time, three more renowned teachers, namely, Assistant Surgeon Dr. H.H. Goodeve, Dr. William O' Shaughnessy and Pandit Madhusudan Gupta joined the college. The college started functioning on 20<sup>th</sup> February, 1835 AD. Initially, the course was for three years duration which was converted to a full 5 years course in 1845 AD. The recognition of

the students were given by the college itself by conferring 'Diploma' till the year 1857 AD, when, after the establishment of the Calcutta University, the onus of awarding the students with the diploma (LMS- Licentiate in Medicine and Surgery) and the degree (MB) was entrusted to the University. Later on, the degree was renamed as MBBS.<sup>9</sup>

Presently, since 2004, the newly founded W.B. University of Health Sciences has been discharging the responsibilities.

#### MEDICAL COLLEGE, BENGAL (Record of Facts)

28 <sup>th</sup> January, 1835	General Order No. 28 was passed
20 <sup>th</sup> February 1835	College started functioning
10 <sup>th</sup> January 1836	First Anatomical dissection took place, headed by Pandit Madhusudan Gupta
1845	Five years course was started
1857	Recognition of the diploma by University of Calcutta

After the establishment of Medical College, Bengal, the necessity was felt for similar institutions in the Madras and the Bombay Presidency by the British rulers. As a result of these, the Madras Medical School (1835), which was later elevated to a college in 1850 and the Grant Medical College, Bombay (1843) was established.

#### GRANT MEDICAL COLLEGE (Record of Facts)

3 <sup>rd</sup> January, 1843	Foundation of J. J. Hospital was laid down
30 <sup>th</sup> March, 1843	Foundation of Medical College was laid down
15 <sup>th</sup> May, 1845	J. J. Hospital was opened
October, 1845	Grant Medical College building completed
3 <sup>rd</sup> November, 1845	GM College opened by Sir George Arthur
1860	Affiliated to Bombay University

#### MADRAS MEDICAL COLLEGE (Record of Facts)

13 <sup>th</sup> February, 1835	General order passed by Governor General Fredrick Adams as 'Madras Medical School'
July, 1835	Classes were started in the college
1850	Converted to 'Madras Medical College'
1863	Degree was recognized by Madras University
11 <sup>th</sup> October, 1875	Ladies were admitted for the first time as students

Gradually, more and more medical teaching institutions came into existence in the different parts of the country. The 'Lahore Medical School' was established by Sir John Lawrence in 1837 AD in Lahore and another medical college was established in Lucknow by the initiative of Raja Rasul Khan in 1905 AD. These two institutions were later named as King Edward Medical College (1910) after Prince Edward VIII and the King Georges Medical College (1912) after King George V, respectively, as they visited India during that period.

#### LAHORE & LUCKNOW MEDICAL COLLEGE (Record of Facts)

1837	Started as Lahore Medical School
1905	Raja Rasul Khan proposed for the Medical College, Lucknow after the visit of King George V
26 <sup>th</sup> November, 1905	Foundation stone was laid down for the Lucknow Medical College
1910	Lahore Medical School was named after King Edward Medical College
25 <sup>th</sup> January, 1912	King Georges Medical College, Lucknow was opened

By 1914 AD, apart from the five medical colleges, there were fourteen medical schools functioning in the different parts of the country. These were in Calcutta (Campbell), Cuttack, Rangoon, Lahore, Agra, Dibrugarh, Poona, Hyderabad (Sind), Ahmedabad, Tanjore, Royapuram, Vizag and Ludhiana. They were gradually upgraded to the status of Medical Colleges within a few decades.<sup>10</sup>

The standard of the medical education imparted in these institutions and the subsequent recognition of the medical degrees awarded by the different universities in India remained a persistent issue for concern to the rulers. Since 1843 AD, the three Medical Colleges of India namely, Medical College, Bengal, Grant Medical College, Mumbai and the Madras Medical College, Chennai were recognized by the Royal College of Surgeons in England. After the establishment of the General Medical Council [GMC] of Great Britain in 1858 AD, it accorded recognition to the 3 (three) Medical Colleges in India. In 1921 AD, the GMC expressed its dissatisfaction over the training of the students in India in Midwifery. They intended to visit the examination process in India which the University of Calcutta did not permit. As a result of this, GMC decided to de-recognize the medical degrees awarded by the Indian universities. Desperate attempt of salvage was undertaken by the Calcutta University by inviting Col. Needham from London as the inspector for the MBBS examination of the university with a view to retain the recognition. But the authorities in London were reluctant to consider. In the mean time, since 1835, the number of medical teaching institutions in India had greatly increased in number and it became increasingly difficult for the authorities in London to look after the huge set of affairs across thousands of miles from the headquarters. Moreover, the recognition of GMC accorded to the Indian degrees was valid for only six months. Finally, GMC resolved to withdraw themselves from the Medical Education in India in 1925 AD. As in effect, the Indian Medical degrees faced a challenge of losing their recognition in the world from 1930 onwards.

The sternness exhibited by GMC, probably, had a different reason altogether, behind the curtain. It is not difficult to assume, the upsurge of the Nationalist Movements for Freedom that started in the later part of the 19<sup>th</sup> Century onwards and the subsequent socio-political developments in India had a catalyzing effect that led to this drastic decision by the authorities of GMC, creating a sudden and unexpected void and uncertainty in the future of the almost a century-old tradition of the western medical education in the country. Reactions among the medical fraternity in India were instantaneous and fierce, as expected, and the upsurge ultimately led to the formation of the 'Medical Council of India' in 1933 AD as the sole authority for the maintenance of the standards of medical education in the country.

### **Medical Council of India [MCI] :**

The need for the establishment of a single, uniform, standard of medical practice in the whole country was felt as early as in 1890 AD when the first attempt of registration of the Doctors was made. Subsequently, in December, 1894 AD, Surgeon General Harvey raised the issue in the Indian Medical Congress for the first time. In

the mean time, a number of autonomous societies e.g. Calcutta Medical School (1886 AD), College of Physicians & Surgeons of Bengal (1897-98 AD) were formed and they started training the aspiring students and issued certificates and diplomas allowing them to practice medicine openly in the society. There was no control of the Government authority over these societies about the standards of teaching and infrastructure and the whole affair of healthcare of the community was in perpetual confusion and jeopardy. As a result, the need for the establishment of an authority to ensure a uniform standard of medical training was strongly felt by the medical fraternity of the country and the Government. The process progressed further with the establishment of the Bombay Medical Act in 1911 AD and Bengal Medical Act in 1914 AD.<sup>13</sup>

Further consolidation of these attempts took place when Sir Pardey Lukis proposed for a national act at the Imperial Legislature Council held in Shimla on 22<sup>nd</sup> September, 1916 AD.

The de-recognition of the Indian medical degrees by the GMC in 1925 AD onwards, which was effected from 1930 AD, made the affairs serious and imperative for the medical fraternity in India amidst widespread confusion, disappointment and frustration. The senior stalwarts of the fraternity were extremely agitated and the zeal of nationalism was mounting up for a permanent and effective solution to the problem.

At the last, all these uproars came to a closure with the establishment of the famous act known as the 'Indian Medical Council Act' in 1933 AD by the Indian Government and this led to the formation of the famous 'Medical Council of India' with Maj. Gen. C. A. Sprawson as its 1<sup>st</sup> President. The act has since been amended more than once with the introduction of the 5 years course in 1935 AD and the duration of the clinical training to 3 years in 1937 AD and so on.<sup>13</sup> The 1<sup>st</sup> inspection of MCI was held in October, 1934 AD in the Patna University.

In the later part of the 19<sup>th</sup> Century, national leaders of our freedom movement felt the need of independence and self-confidence in the field of healthcare and medical education in the country. This may be identified as the 'Nationalist phase'. It is difficult to pin-point the exact beginning of the 'Nationalist phase' of Education in India. However, a section of the historians are of the opinion that the movement of the 'Young Bengals' inspired by the ideologies of Derozio, can be accepted as an watershed in the history of education in India when the Indian mind tried to create an alternative model of education different from that set by the British rulers on the recommendations of Macaulay and Trevelyan.<sup>14</sup> Since the Nationalist Freedom Movement gained momentum in the last part of the 19<sup>th</sup> century, the feeling for the need of a parallel system of healthcare and medical education in India grew stronger among the leaders of the freedom movement and the intellectual section of the society, doctors in particular, as many of them were actively involved in the movement. As a result of it, a number of schools and societies were formed by them in order to address the burning health problems of the society, mostly 'Public Health' in nature like Malaria and Kala-azar. They were also eager to form an indigenous

system of medical education in India in the western model and as a result of it, institutions like the Belgachia Medical College (1916 AD), which was later renamed as the R. G. Kar Medical College in 1948 AD and the National Medical Institute (1921 AD) later named as Calcutta National Medical College in 1948 AD, were established.<sup>15</sup> In this connection, it will not be irrelevant to mention that apart from the medical institutions, ancillary research and pharmaceutical establishments like the 'Bengal Immunity Co.' (1919 AD) and the 'Bengal Chemical Laboratory' (1901 AD) were also founded by the 'Nationalist' medical and scientific community of this country during this period. There was an attempt to modify the system of medical education and the curriculum different from that which was practiced in the so called 'Imperial' medical institutions, mostly in line of the 'Public Health' oriented education in these 'National' institutions instead of the 'European model of approach' of the former ones. These attempts, though transient, had a far reaching impact on the future planning of the 'Healthcare & Medical Education policies' in India and this period should be marked as the 'Nationalist phase' of Medical education in India. This upsurge of these activities merged later with the more prominent 'Socialistic phase' of healthcare and medical education in independent India.

**Socialistic Phase** — The British rulers in India were concerned about the miserable status of the public health in India since they decided to rule this country in the 18<sup>th</sup> century. But the principal focus of that concern was to protect the British officers and their staff in India from the innumerable pestilences that prevailed in the country. Therefore, the principal area of the attention was the sanitation and the prevention of the epidemics. Later on, with the actual magnitude of the huge public health problems understood, there were attempts of various reforms as well as decentralization of the health administration and management. However, some of the important steps like the establishment of the birth and death registration and promulgation of some of the important health related acts like the 'Vaccination act', the 'Epidemic diseases act', the 'Central Malaria bureau' etc. were undertaken in British India.

The efforts in the direction of socialized form of health care in India was actually epitomized in the famous report of the celebrated 'Bhore Committee' (1943-46) which reviewed the health of the nation under (a) Public health, (b) Medical relief, (c) Professional education, (d) Medical research and (e) International health. The committee recommended a short term and a long term program for the attainment of reasonable health services based on the concept of modern health practice.

In the independent India, under the leadership of Pandit Nehru envisaged a developed nation, on the principles laid down in the Constitution of India to develop an 'Welfare State'. The 'Bhore committee' report became an important cornerstone in framing the plans and measures adopted by the national government. The building of the newly founded Nation, further inspired by the model of the erstwhile Russia, adopted a 'Socialistic model of development' with overwhelming control of the State in every sphere of the national life, as evident from the drafts of the 1<sup>st</sup> and the 2<sup>nd</sup> five year plans

in 1951-55 and 1956-61 respectively.<sup>18,19</sup> In fact, the healthcare problems in the newly independent India was keenly alike those in Russia in the contemporary period, where the re-organization of the public health services, the change in the direction of the training of doctors, as well as a sharp increase in the number of students made it imperative the necessity of changing the organizational structure of medical educational institutions.<sup>18</sup> In the same line, the plan for the development of Medical Education in India included the reorganization of the Medical Institutions and laid a strong emphasis on the development of 'Preventive & Social Medicine' in the 1<sup>st</sup> plan (Para 74-85)<sup>18</sup> and the establishment of a separate department for the 'Preventive & Social Medicine' in the 2<sup>nd</sup> plan (Para 9-11)<sup>17</sup>, more commonly known as the 'Mahalanabis Plan' after the name of the pioneer statistician of India Prof. P. C. Mahalanabis. Since then, a number of experiments have taken place in order to organize the healthcare and medical education of the country in the direction of 'Socialistic ideals'. Inspired by the 'Feldshers' system of USSR and the 'Bare-foot Doctors' of the Peoples Republic of China, the introduction of the ROME (Re-orientation of Medical Education) program and revamping of the 'Licentiate course' were attempted in India.<sup>21</sup> In fact, the history of medical education in India till the 90's remained centered around the idea of 'Socialized Rural Health Care for all'.

The present stage of the healthcare and medical education in India may be designated as the 'Globalization phase'. The political, social and economic changes over the globe since 1990 did not spare India. The economic liberalization, increased influence of the market economy on the social sectors, resulted in the fundamental changes in the healthcare sector as well as in the medical education of the country. In this stage of globalization, the difference in the philosophy of the social governance between a developed country like USA and a developing nation like India has been narrow and in both of the countries a public service like health has been transferred into a for-profit enterprise in which physicians are 'health-care providers', patients are viewed as consumers and both of them sub-serve the corporate interests.<sup>8</sup> This shift in attitude has led to an alarming rise in the incidences of medical malpractices and there has been a paradigm shift in the mindset of the medical world to a variable extent towards increasing violence instead of benevolence.<sup>20</sup> A large number of private medical institutions came into existence over the last two decades and many are coming up every day, particularly in the southern and the western provinces of India. The trend may be compared to the status of the medical education in USA in the first part of the 20<sup>th</sup> century. Maintenance of the standard became a great problem and it was discussed in details in the celebrated 'Flexner report' in 1910.<sup>21</sup> Newer concepts like the 'Corporate health-care', 'Health tourism', 'Intellectual property rights' and in particular, the large scale involvements of the multi-nationals in the drug and pharmaceutical sectors of the country are shaping the face of the healthcare and the medical education of the country in the 21<sup>st</sup> century in a new direction. The emerging scenario is not very clear, even to the most knowledgeable ones and as a

result, a lot of confusion, as well as apprehension prevail among the different sections of the society. The problem has been duly identified by the 'National Knowledge Commission' in their report and they said - "Medical education is a part of the whole system of education which is in crisis mode today and we are paying a very heavy price for inadequately investing in balanced growth for the social sector, i.e. Health and Education, and in permitting moral degradation to set into these areas while building an industrial and technological capacity."<sup>22</sup> The downward shift of healthcare from the status of a 'Noble profession' to the 'Health services' and then towards the 'Customer care' may not be a welcome change for the Indian society which is traditionally accustomed to visualize the 'Doctor' in the light of a 'Messiah'. None could have even dreamt of a situation that the 'Doctors' could have been booked under the CPA in India, even quarter of a century ago.

### CONCLUSION

Historically, the guiding Philosophical principles of the system of healthcare as well as medical education in India have passed through a number of phases over the centuries. The most striking point is that the different phases did not come in a linear pattern, that is, one after another. Rather, they continued to emerge like newer petals of a flower over-riding the older ones. As a result of which, all of these stages actually co-exist in the contemporary India, although, to a variable extent. If one searches seriously, it is not difficult to find that the traditional system of 'Gurukul' method of teaching peacefully co-exists just by the side of a modern medical research institution, at times, often inside it! A definite attempt of balance has been tried by the Union Government in the planning of the healthcare and medical education in the country in the 21<sup>st</sup> century as evident from the layout of the 11<sup>th</sup> Five-year plan of the Government of India<sup>23</sup>. The question is to what extent the Government will be able to formulate a perfectly integrated and balanced system of healthcare and medical education for the country in future taking into consideration the complex aspects of the different systems of medicine prevalent in the country, each having its unique role in the Indian society?

Health is said to be the 'Mirror of the society' and so is the system of healthcare and medical education in any society | history. It is the same set of values and foresight that operate behind both of these essential constituents of a social system. Faculty development is an important component in medical education. It is necessary to organize faculty development in a systematic manner. Prudence and insight is necessary at various levels, as the stakeholders are many, viz., the policy makers, the Government of India, Medical Council of India, teachers, students and private and government college managements.<sup>24</sup>

India lies at an important crossroad in the field of the healthcare and medical education in the 21<sup>st</sup> century and has a difficult task ahead to formulate the suitable mode of action that should fit the pauper as well as the millionaire at the same time.

A fine act of balance indeed!

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