



Pre Independence Indian Medical Education with Reference to The Flexner's Report – A Review

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Abstract: *Flexner's report was the landmark in the history of medical education and considered to be a classic in the literature of Education. His 1910 report included a conceptual model of how modern medical education should be conducted. There were a few Medical Schools in India before independence (1947). The growth and development of Indian Medical Education was observed in many constitutional acts and commissions appointed by the Government. The inclusions of Flexner's report find a place in the policy documents or reports framed by Indian authorities from time to time pertaining to Governance of System of Medical education in Pre-independence India.*

Keywords: *Flexner's report, History of Medical Education in India, Medical Council of India*

I. Introduction

Medical Education is undoubtedly one of the most important factors that impact the growth and development of a country as well as the future course of the country's people as a whole. It opens up opportunities leading to the enhancement of both the individuals and group potentials. Improvements in education are not only expected to enhance efficiency but also augment the overall quality of life.

Medical education in India is provided by a large number of institutions, both public and private, with disparity in the quality of instruction. Since last few decades it has been observed that, there has been a rapid proliferation in the number of medical colleges in India particularly in the private sector. As of now there are 462 Medical colleges in India with an intake capacity of 63535 students per year. But the number during pre-independence period was much less as only 19 medical colleges existed then.

Medical Council of India (MCI) regulates Medical Education in India. MCI was established as a statutory body under the provisions of the Indian Medical Council Act 1933, which was later, replaced by the Indian Medical Council Act, 1956 (102 of 1956). The main function of the Council is maintenance of uniform standard of Medical education at undergraduate and post-graduate level in India.

The large number has led to lack of uniformity and resultant dilution of desired standards in medical education. Though the number of doctors graduating every year is large; there are problems in terms of distribution, access, and equity of health care. The curricula in most medical schools are largely traditional and curricular innovations are being implemented in miniscule proportion of medical schools.

Health education in India has not been accorded a place of pride in Government organizations, non-Government agencies, educational institutions and media organizations. The dream of 'Health for All By 2000 AD' has not been translated into a reality mainly due to lack of formal and informal health education in India. Also the quality of medical education in India is threatened by various factors like inadequate public funding in health industry, explosive growth of private medical schools because of which monitoring process turn out to be difficult. Competition for students' fees, no separate accreditation process for medical schools have resulted in questionable admission practices, antiquated learning methods, and less valid assessment process.

Flexner's report was the landmark in the history of medical training, is considered to be a classic in the literature of Education. His 1910 report included a conceptual model of how modern medical education should be conducted. It is true that there is no documentary evidence available in the records to bring out the impact of the said report on the development of the Indian Medical Education. Hence, the core purpose is to critically examine the pre independence Indian Medical Education with reference to the Flexner's Report.

II. History of Medicine of India

Till the eighteenth century the teaching and practice of medicine in India was done according to the Ayurvedic or ancient Vedic Hindu system and the Unani or Arabic system based on the Egyptian and Greek schools brought to India by the Greek and Muslim rulers.

The wisdom and seniority of the great teachers Charaka and Sushruta compared to the pioneer western physicians like Hippocrates and other famous Greek physicians were accepted universally not only in basic medical sciences, therapeutics and surgery but also in laying down the ethical code for practice of medicine and nursing.

In the early 19th century, the British Government of India could not entrust the health care of their own people in the hands of Ayurveda and Unani and they had to bring medical men from Europe. The British Surgeons trained a few Indians with the elementary principles of diagnosis and treatment of disease and appointed them as Native Doctors to help them as compounders and dressers.

They received no systematic education but had to pass through tests before being entitled to higher pay and responsibilities. The services of these dedicated men were soon appreciated by the British Surgeons and in 19th May 1822, the Medical Board of the British Surgeons wrote to the then Secretary to the Government of India for a more systematic education for the Native doctors which was formally approved on 24th May 1882.

With a Government Order dated 21st June 1822, the first Medical School in British India was established. The School opened in October 1824 at Calcutta Sanskrit College with Dr. James Jamieson as the first Superintendent. The period of training was for 3 years. The first one-year was spent on lessons on Anatomy, Physiology, Pharmacology and Materia Medica. Medicine and Surgery were taught during two senior classes. The students had to attend the Native Hospital, the General Hospital, the Company's Dispensary, the Eye Infirmary and the department of the Superintendent of vaccination for clinical teaching.

In 1833 Lord William Bentinck, the then Governor of India, appointed a Committee to make a report on the existing medical education and institutions in order to revise and improve on Indian Medical Education. The Committee submitted their report on October 20th 1834. The Committee advised immediate abolition of the Native Medical School and suggested the formation of a Medical College for Indians.

English was chosen as the language of instruction mainly for utilisation of the immense wealth of printed work and illustrations in the Western medical literature. On the recommendation of the Committee, a Government Order No.28 of 28th January 1835, Medical College of Bengal was established. There was no library, museum, apparatus or hospital to start with. A few books and apparatus were transferred from the abolished Native Medical Institution to the Medical College.

Although the western system of medicine came to India through the Portuguese in the early 1500s, it was not until the British East India Company constructed a hospital in Madras (presently Chennai) that it was practiced formally in an Indian hospital. It was after the founding of Madras in 1639 and the construction of Fort St George in 1640 that the British considered setting up a permanent medical facility in India. This is illustrated in a letter written by Governor Sir Edward Winter to the East India Company.

They converted rented house in 1664 to a small hospital (Madras General Hospital), lodging 8–10 sick British soldiers of the garrison. The hospital was initially located in Fort St George and was then moved to its current location in 1772. In 1827, the hospital was imparting training to Europeans, Eurasians and Indians in western allopathic medicine. What started off as a private medical hall, was regularized into a medical school, the Madras Medical School, in 1835. Indians were admitted to the school from 1842. On 1 October 1850, the school council submitted a proposal for it to be accorded the status of a college and the school was christened the Madras Medical College. In 1852, the first batch graduated and these students were awarded the degree of graduate of Madras Medical College. The MMC was affiliated to the University of Madras from 1857 to 1988, when the Tamil Nadu Dr M.G.R. Medical University was established.

Other Medical colleges were also established during the course of time. But the growth of Medical Colleges was a slow process in India and in 1946, there were only 19 medical college with intake of 1200 students per year.

III. Abraham Flexner; Flexner's Report and its Impact on American Medical Schools

Abraham Flexner, a former school teacher and expert on educational practices whose background and training made him an outlier in the Circle. Education and being well educated had become the secular faith that replaced religious orthodoxy for Abraham. His talents as a teacher generated a large following that facilitated his establishment of a private high school, where his visionary concepts of education were instituted and refined. His educational philosophy resembled that of the progressive model of John Dewey in which students learned by doing, by solving problems, rather than rote memorization that was the more common educational motif of the day. It was a philosophy that he would translate into his transformation of medical education in America.

He pursued an M. Phil at Harvard in philosophy and journeyed to Europe, where he visited schools in Great Britain, France, and, particularly, Germany. His continental seasoning was focused upon university medical education in these countries, paralleling the then common practice of young American physicians in completing their medical studies abroad. It was out of his practical experience as an educator in America and his exploration

of pedagogical strategies in Europe that he distilled his critiques of and correctives for American schooling in his book, *The American College*. Flexner and his expertise came to the attention of Henry Pritchett, head of the Carnegie Foundation, upon reading *The American College*. The foundation members surmised that improvement in the very sorry state of medical schooling in America was necessary; they invited Abraham Flexner to survey the quality of medical schools throughout America and Canada and provide suggestions for their improvement. They perceived the problem of medical education as a problem of education and believed a professional educator was better qualified to address this dimension of the problem. They also had preconceived ideas concerning what changes needed to be made in medical schools to allow these ideas to be introduced. The report upon medical education, prepared, under the direction of the Foundation, by Mr. Abraham Flexner, was the first result of that action. Flexner drew heavily on the standards for medical education previously developed by other organizations. He evaluated institutions from the point of view of an educator and not a medical practitioner. The singular fact on which this study contemplated by the organization was that medical education in the country had hitherto been such as not only to commercialize the process of education itself, but also to obscure in the minds of the public any discrimination between the well trained physician and the physician who had had no adequate training whatsoever.

He visited 155 medical schools in the United States and Canada between December 1908 and April 1910. The Carnegie Foundation published the report in 1910, the 346-page arose from research conducted by Flexner. He sought data on five points for each of the schools:

1. Entrance requirements and adherence to them,
2. The size and training of the faculty,
3. The sum and allocation of endowment and fees to support the institution,
4. The adequacy and quality of the laboratories as well as the training and qualifications of the laboratory instructors, and
5. The relationships between the school and its associated hospitals.

Although Flexner's motives and methods may be disputed, his systematic collection of data is remarkable for his time. Indeed, a scientific veneer distinguishes the Report from prior attempts to reform medical education.

The significant facts revealed by this study were

1. For twenty-five years past there has been an enormous over-production of un-educated and ill trained medical practitioners.
2. Over-production of ill trained men is due in the main to the existence of a very large number of commercial schools, sustained in many cases by advertising methods through which a mass of unprepared youth is drawn out of industrial occupations into the study of medicine.
3. Considering the medical school was a profitable business, the methods of instruction were mainly didactic.
4. A hospital under complete educational control was necessary to a medical school. High grade teaching within a hospital introduces a most wholesome and beneficial influence into its routine.

The very disappearance of many existing schools was part of the reconstructive process. Indeed, in the course of preparing the report a number of results had already come about which were of the highest interest from the constructive point of view.

Statistical Data of Impact of Flexner's report on U.S. and Canadian Schools was as follows:

About 58% schools did not close or merge as a result of the Report, 7% Closed or merged because of the Report and 35% Closed or merged for unclear reasons.

IV. Lord Curzon's Educational Policy, 1904

The chief-architect of the educational policy published in pre independent India on March, 11, 1904 was Lord Curzon. It was a very significant Government Resolution. *So the year, 1904, may be considered as an important landmark in the history of the educational development in India.* In respect of organizational administration of the elementary schools, curriculum, appointment of teachers, management, finance etc. a beginning was made for bigger changes to follow in course of time.

As regards higher education the Resolution stated that the scope was unduly narrowed, quality of education unsatisfactory and that those who failed to obtain employment under the Government were ill fitted for other pursuits. The courses of studies were purely literary and was examination ridden. *Instead of intelligent comprehension of the subject matter; the attention was paid to memorization and mechanical repetition.*

The scope of technical education was very much limited and was not so useful for general masses for bringing about economical development of the country. Hence for quality education at this level the Resolution recommended for proper inspection, control and systematic grant- in-aid.

The Educational policy devised by Lord Curzon has given a correct analysis of the brighter and darker aspects of the contemporary Indian education; but unfortunately though the diagnosis was correct, the remedy suggested was neither appropriate nor opportune. Lord Curzon was right in many things he said; but it was the way in which he

wanted to reform that raised grave suspicions in the minds of the educated Indians. They thought that this reform move camouflaged some deep political motive.

V. Indian Universities Act, 1904

The recommendation of Indian Universities Commission appeared after slight amendments in the shape of Indian Universities Act, which came into force on March, 1904. The majority of council members passed it. The following important changes were introduced for the upliftment of University Education.

- Universities were empowered to appoint their own staff including the teaching staff;
- The number of Fellows of a University was limited within 50 to 100 and their tenure of office was reduced to five years;
- The number of elected Fellows was fixed at 20 for the Bombay, Madras and Calcutta Universities and 15 for others;
- Rules pertaining to affiliation of Colleges to a University were made stricter;
- Government was empowered to modify the rules framed by the Senate;

The University Act brought about changes in the administration of University education. Owing to the scarcity of Technical Colleges there was no scope of vocational education and most of the students sought admission to arts and science colleges.

The Act directed the Universities to undertake teaching function. As a result Post-Graduate teaching was introduced in Calcutta University and Bombay University introduced 'honors' course in different subjects. Special provision was made for research work in Science.

The period from 1904 to 1912, was though a time of attention, yet results were in no way impressive and spectacular. Even then it was a period of activity in the field of elementary education. The political agitation during this period influenced the education in general and primary education in particular.

VI. Indian Medical Degrees Act; 1916

In extension of the 1904 Education Policy Indian Medical Degrees Act received the assent of the Governor-General on the 16th March 1916. This was an Act to regulate the grant of titles implying qualification in Western medical Science and the assumption and use by unqualified persons of such title.

This act provided the Right to confer degrees, Prohibition of unauthorized conferment of degrees, cognizance of offence etc.

The right of conferring, granting or issuing degrees, diplomas, licenses certificates or other documents stating or implying that the holder grantee or recipient there of qualified to practices western medical science, shall exercise able only by the authorities specified in the schedule and such other authority may, by notification and subject to such conditions and restrictions as (if) thinks fit to impose authorize in this behalf.

VII. Calcutta University Commission, 1917 (Sadler Commission)

In 1917, the Calcutta University Commission was appointed by the Government of India under the Chairmanship of Mr. Michel Sadler, the Vice-Chancellor of the University of Leeds. So it was popularly known as the **Sadler Commission**. This Commission was appointed for the purpose of making recommendations to reform Calcutta University. Although it dealt with the Calcutta University only, the problems it had studied were more or less common to the other Indian Universities. So the report of the Commission is a document of in provincial importance and it had far reaching consequences upon the development of University in India as a whole.

The Commission came to the conclusion that the University system itself, particularly in Bengal, was "fundamentally defective in every aspect". The number of students was "too great to be efficiently dealt with". The colleges were "generally too meagerly staffed and equipped to be able to do justice to their students". The courses of studies were "too predominantly literary in character and too little varied to suit varied needs".

The administration was "unsatisfactory and ineffective as an instrument for the encouragement of learning". On the other hand, it studied the problems of secondary education, as the improvement of secondary education was an essential foundation for the promotion of University teaching itself.

Some important relevant (educational) recommendations of Sadler commission:

1. Introduction of Honors courses as distinct from pass courses to meet the requirements of able students;
2. Formation of Selection Committee including the external expert to select Professors, Readers and Lecturers;
3. Expansion of vocational and professional education including Teachers Training;
4. Formation of Academic Council and Board of Studies for setting academic matters relating to courses of studies, examination, research etc.

After the recommendations of the Commission many new Universities were established and some of the recommendations were also implemented for the improvement of University education. By the Mont-Ford Reforms, 1919, education was transferred to the control of provincial Governments and the educational growth was pushed upward.

The non-cooperation movement and the national awakening helped a lot in molding the educational pattern of the country according to the changing needs and spirit of times. The official opinion held that the sudden rise in quantity had led to a great dilution of quality and that the educational system of India was largely ineffective and wasteful.

VIII. Bhore Committee Report (1946)

This committee, known as the Health Survey and Development Committee, was appointed in 1943 with Sir Joseph Bhore, Indian Civil Servant, as its Chairman by Preindependent GOI. It laid emphasis on integration of curative and preventive medicine at all levels. It made comprehensive recommendations for remodeling of health services in India.

Observations of Bhore Commission on Medical Education:

Under this head they consider the facilities available for the training of undergraduates and of medical licentiates, for postgraduate education and for refresher courses.

1. Undergraduate Training - Undergraduate training was given in colleges affiliated to universities and the preliminary educational qualifications for entrance to such colleges was an Intermediate in Science or a qualification, recognized as equivalent.

2. Admission to medical colleges - There were 19 medical colleges, which include two in Indian States (Mysore and Hyderabad) and a special college at Delhi for women students only. The total number of students admitted into these colleges each year is about 1,200.

3. Course of study - The course of study extends, in the majority of medical colleges, over a period of five years. A six months' preliminary Pre-Registration course is, however, insisted upon before the commencement of the regular medical course in the Madras.

4. Pre-clinical Training - The teaching of the basic medical sciences of Anatomy and Physiology covers generally a period of two academic years. In preclinical teaching, they observed that 1. Too much detail was taught; 2. the practical application of these subjects to later studies in clinical subjects is not brought home to the student; 3. the transition from pre-clinical to clinical studies is abrupt; and 4. the student in the period of clinical training does not have applied anatomy and applied physiology taught to him by his pre-clinical professors.

5. Lack of research atmosphere: It is noticeable in practically all the medical colleges in the country that the teaching of the pre-clinical subjects has not been organized in an atmosphere of research, with the result that the student's powers of observation and of drawing deductions from such observation are not adequately stimulated.

6. Clinical training - A survey of existing facilities for the clinical training of medical students reveals the fact that there is considerable room for improvement. Some important observations are:

- a. Too many didactic lectures are being given in the colleges with little benefit to the student.
- b. There is imperfect correlation in the teaching of Pathology, Bacteriology, Hygiene, Medicine and Surgery. As a consequence there is repetition of the same theme, possible divergence in the methods of teaching and waste of time and energy.
- c. Further, there is little or no coordination and planning in clinical instructions among the different clinical teachers of a department (medicine, surgery or obstetrics and gynaecology), so that the student, who passes from one; clinical teacher to another, is not infrequently treated to a repetition of the same topics.
- d. We are advised that a ratio of 10 beds to each student is what is normally required.

7. Teaching Staff: As regards the teaching staff, a survey of the existing medical colleges has made it clear that the number of teachers, in most of them, was inadequate for the total number of students.

8. Laboratory facilities and equipment: There had been a certain amount of difficulty for the different medical colleges to secure adequate stocks of equipment and laboratories have had to be run with a shortage of various chemicals and appliances..

9. Library - In many colleges the library facilities available were not adequate either for the students or for the staff.

10. The Technical Control of Undergraduate Medical Education:

Inspection by MCI: The Indian Medical Council has the right to inspect medical colleges and to suggest methods of improving the efficiency of the training given.

11. The Training of Teachers: No special facilities were available in the universities for the training of teachers in the different subjects of the medical curriculum (with some exceptions).

IX. Recommendations of Bhore Committee

1. There is a great need for a reorganization of the standards of professional training in order to provide the types of workers who will be fully equipped for participation in a modern health program with its newer and expanding conception of service to the community.
2. For Undergraduate curriculum, following changes are recommended:
 - a. Emphasis in undergraduate teaching will be on inclusion of principles and methods which would enable the student to learn for himself, think, observe and draw conclusions.

- b. The teaching of preclinical subjects will not end with passing of examinations, but will extend into and throughout the clinical years by regular courses given not informally by clinicians, but by regular teachers in the preclinical subjects.
- c. There should be reduction in the size of the classes and increased in number of teachers.
- d. The mechanical equipments in laboratory such as microscopes, haemoglobinometers should be adequate.
- e. At the beginning of the clinical period, a short course of instructions should be given in the methods of clinical diagnosis and laboratory technique, the elements of nursing and introduction to the subject of social medicine.
- f. The clinical subjects should be taught mainly by whole time teachers. These teachers should be regularly updated by conferences or symposias etc.
- g. The number of beds in a unit should be at least 40 and 8 to 10 students should be attached to each unit.
- h. The proportion preferably of junior teachers to students be 1:8 and of senior teachers 1:10.
- i. A wide margin or scope should be allowed to individual medical colleges and Universities to develop their own potentialities and even to experiment potentialities to bring reforms and improvements, provided that the obligations to conform to certain known minimum standards is met.
- j. Every student should undergo one year "internship" during which he should work under supervision and not be given the full right of practitioner.
- k. There should be improvement in existing colleges or even may increase the number of schools.
- l. The minimum yearly admission should be normally 100, although, during the short term program, it is suggested that admission might be raised to 120 in order to help in the production as many qualified men as possible.
- m. Throughout the period of the course, the importance of the research should be stressed.

The report stressed that the prime necessity for the maintenance of Medical education at high level and subject to basic requirements. The report also described that the States should have their power to extend facilities for sound medical education. They also advised that number of states should join together to bring institutions adequately equipped and administered for the purpose into being to serve their needs.

X. Conclusion

There were quite few Institutions imparting Medical Education in India before independence (1947). The development of Medical Education was noted in some constitutional acts and committees appointed by then Government. During preindependence period, Bhore commission's Health Survey and Development report had a significant findings and recommendations. The line and direction as espoused vide the inclusions in the Flexner's report implicitly find a echoed in the policy documents or reports framed by Indian authorities from time to time pertaining to Governance of System of Medical education in Pre-independence India including its institutionalization and other cogent process associated with it.

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