



Philosophy of medical education

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Abstract

Introduction: Education is defined as an art with scientific principle. It is described as a form of learning by which knowledge, skills and attitudes of an age group are transferred from one generation to the next through teaching, training, research and practice.

Method: This is a historical review about the philosophy of medical education and its changes during the time.

Results: It is unfortunate that many developing countries follow the US system rather than those with public financing pattern. Indeed, these systems are “disease care” and not “healthcare” and are mainly motivated by profit.

Conclusion: The educational planners in medical schools must design a curricula for students and residents to acquire a crucial set of professional values and qualities, by which the willingness to put the needs of the patient and society first.

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Introduction

Education is defined as an art with scientific principle. It is described as a form of learning by which knowledge, skills and attitudes of an age group are transferred from one generation to the next through teaching, training, research and practice (1).

The process of education is expected to bring a change in thinking, feeling and acting of learners and give them the knowledge and skills in general or in a specific branch of science.

Medical education varies from many other branches of science, technology, literature and art; since it deals with human life and well-being, and requires special knowledge, skills and behavior.

In ancient times, with limited knowledge of medicine, the student would usually act as an assistant to a physician. After years of apprenticeship, through this experience, medical knowledge was relayed, and by working alongside the experienced clinician, the student would replace the old “traditional doctor”

after the old physician died (2).

Medicine used to be an art for thousands of years. The effective and successful practitioners were those who were most familiar with the psychology of their patients. For centuries, this type of practice continued and since there was no basis for measuring the expertise of the practitioner, many quacks and charlatans impersonated the physician and in some instances they were even more successful than the so-called “trained physician”.

Method

This is a historical review about the philosophy of medical education and its changes during the time.

From ancient times of the Greeks, Persians and Romans, official schools for training physicians were recorded. Following the European renaissance in the early 16th century, most European universities established medical schools based on Canon book of Avicenna (Ibn Sina), the famous Persian physician

and philosopher (3).

In the United States the first medical school was established at the University of Pennsylvania in 1756. Within 150 years over 155 medical schools were established in North America (4, 5).

In 1862, Louis Pasteur discovered bacteria and Koch introduced his famous discovery, “the Koch phenomena” of reproducing a medical experience, by which the causes and effects of infectious diseases were proven. This was the era when medicine started to transform into science (1, 2). Furthermore, with gradual gain in the knowledge of physiology, anatomy and pathology, medicine turned into a scientific discipline.

It was during the 18th and 19th centuries that the flurry of scientific-based medical schools were established all over the Western Europe, the United States and Russia.

This evolution in medicine created institutions of medical teaching as a science. In the early 20th Century, with the introduction of medical journals, many reports from educators, foundations, and task forces criticized the medical education, which was norm in the United States and Western Europe, for not emphasizing on scientific knowledge, biologic understanding, and clinical judgment and skills on scientific grounds.

In 1910, Flexner made a famous report about medical education, which changed the philosophy and the pattern of education in medical schools of the United States and Canada. This, in turn, affected medical education around the world. His emphasis was on the scientific basis of medicine and based on his report, a number of medical schools were forced into closure (6, 7).

The Flexner report also addressed the need for enhancement in the quality of medical curriculum and education. Attempts were made to make changes, namely that of admission into medical schools and also changing the content of the medical school curriculum toward basic science. To improve medical education, admission policies and processes were also radically changed.

The creation of a standardized test in the United States for medical school admissions was the initial step. The Medical College Admission Test (MCAT) was developed in 1928 (8).

This examination was designed to improve attrition rates for medical schools which at the time ranged from 5% to 50%. With the administration of the MCAT, by 1946 the entrance into attrition rates decreased to 7 percent in US medical universities (9).

In this process and evolution of medical education, the emphasis was put on the basic science. Consequently, clinical science and patient care were

largely put aside.

In early 1960's the research on molecular biology became the primary objective of most medical schools in the Western countries and patient care was further pushed aside. The culture of “publish or perish” dominated most of the medical institutions. This pattern was also followed in those countries with scientific ties with the West.

Following the introduction of ‘government care’ in the United States, the medical faculty in the US was under pressure to generate income for the university hospitals. This had practically pushed aside the teaching of clinical medicine and bedside skills. The main emphasis shifted toward tertiary care, specialty, and sub-specialty training which generated the most revenue for their respective institutions. Professors in these areas were role models for their students. There was a tendency toward subspecialty training. Procedure and technology oriented practice became the aim of the most medical graduates. For profit hospitals with the latest technology were established in many parts of the world, including developing nations. The resources were prioritized toward tertiary care. The primary care physician, family practice and public health were ignored and the power of finance overcame the compassionate care for the patient. The general health and welfare of society as a whole were completely ignored.

The qualifications required for entering an academic position were mostly based on specialty and subspecialty training as well as board certification in those very narrow fields of medicine.

Results

The “Art of Medicine” lasted for many centuries; however, the “Science of Medicine” did not last very long. For the past few decades the “Business of Medicine” had been mixed, if not completely replaced the primary goal of many medical institutions. Universities were obliged to compete with the “Market” in the ever-increasing crowded “for profit” medical establishments. Most other free market economies of Europe, despite their free enterprise and capitalistic system, have chosen publicly administered system of medical care. Despite some criticism by Western European and Canadian physicians, as well as some members of the public, the health parameters in these countries remains superior to those in countries with a free enterprise system of health care such as the USA and those countries in the world who follow such a system.

It is unfortunate that many developing countries follow the US system rather than those with public financing pattern. Indeed, these systems are “disease care” and not “healthcare” and are mainly motivated

by profit. The percentage of gross national product (GNP) spent for healthcare nowadays in the United States exceed 17%, which is highest in the world, while its infant mortality rate ranks 13th (10).

Any reform in medical care and education cannot be attained in isolation; it must be alongside prioritizing the most relevant problems of the respected societies in which the medical schools are being served. Medical profession and education seems to be in an endless state of discontent. From the early 1900s to the present, many have criticized medical education for too much emphasis on scientific knowledge over biologic understanding, clinical reasoning, skill, and the development of character, compassion, and integrity (11).

How did we end up with such a tragic situation, and what can be done about it?

The changes in medical education over the past century and the current challenges are a huge task for medical educators as well as medical profession as a whole. Applying and using the following objectives:

More humanistic goals for professional medical education: to transmit knowledge, skills, and attitude with compassion toward humanistic attitude for the medical profession.

Within 15 years after issuing his report, Flexner had completely changed his belief that the medical curriculum overweighed the scientific aspects of medicine to the social and humanistic aspects of the profession. He wrote in 1925, "Scientific medicine in America, young, vigorous and positivistic is today sadly deficient in cultural and philosophic background."

There is no doubt he would be disappointed nowadays to see the extent to which his modified view of 1925 still holds very true (10).

Conclusion

The educational planners in medical schools must design a curricula for students and residents to acquire a crucial set of professional values and qualities, by which the willingness to put the needs of the patient and society first. The value of physician service is not solely visiting and attending the patients, it is rather a highly passionate concern for the feeling and welfare of the patient. Professional values must be stressed and underlined in the entire course of medical school through role modeling, and being an example of dedication with the health care environment, not just lectures and courses on ethics and patient-doctor relation.

Medical students and residents are observing firsthand the struggle of patients who belong to the working and underinsured class of people. The observation of an inequality to acquire health care,

obvious differences in the use of life saving tools in innumerable health care settings, as compared to the university hospitals creates a major conflict for the medical student. The interaction of physician/teachers has been further complicated by the promotional activities of some of the researchers with the pharmaceutical companies and medical instrument firms. Naturally, the researchers are biased in favor of their sponsors.

As long as financial gains and obligations of medical institutions remains the primary objective of medical schools, it would be practically impossible to modify the present crisis in medicine and medical education.

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