

# Emphasizing humanities in medical education: Promoting the integration of medical scientific spirit and medical humanistic spirit

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## Summary

In the era of the biological-psychological-social medicine model, an ideal of modern medicine is to enhance the humanities in medical education, to foster medical talents with humanistic spirit, and to promote the integration of scientific spirit and humanistic spirit in medicine. Throughout the United States (US), United Kingdom (UK), other Western countries, and some Asian countries like Japan, many medical universities have already integrated the learning of medical humanities in their curricula and recognized their value. While in China, although medical education reform over the past decade has emphasized the topic of medical humanities to increase the professionalism of future physicians, the integration of medical humanity courses in medical universities has lagged behind the pace in Western countries. In addition, current courses in medical humanities were arbitrarily established due to a lack of organizational independence. For various reasons like a shortage of instructors, medical universities have failed to pay sufficient attention to medical humanities education given the urgent needs of society. The medical problems in contemporary Chinese society are not solely the purview of biomedical technology; what matters more is enhancing the humanities in medical education and fostering medical talents with humanistic spirit. Emphasizing the humanities in medical education and promoting the integration of medical scientific spirit and medical humanistic spirit have become one of the most pressing issues China must address. Greater attention should be paid to reasonable integration of humanities into the medical curriculum, creation of medical courses related to humanities and optimization of the curriculum, and actively allocating abundant teaching resources and exploring better methods of instruction.

**Keywords:** Medical humanities, medical education, Chinese medical students, healthcare

## 1. Introduction

"To Cure Sometimes, To Relieve Often, To Comfort Always", the aphorism engraved on the tombstone of Dr. Edward Livingston Trudeau (1848-1915) has witnessed a century's time and been shining the light of medical humanities. It is a reminder that the duties of medical practitioners are not limited to the treatment of disease,

but also include relieving and comforting patients. "To Relieve Often, To Comfort Always" is an expression of humanistic spirit; if humanistic spirit were to be divorced from medical practice, then the essential goal of medicine would be betrayed.

The past 40 years have witnessed tremendous advances in medical science, including the development of new approaches and devices that have substantially altered the courses of various diseases, the sequencing of the human genome, the development of new biologic agents and approaches to treat cancers and autoimmune diseases, and advances in transplantation (1,2). Furthermore, advances in electronics, optics, mechanical equipment, and technology have been extensively incorporated into medical practice, changing ways of thinking, routes of and algorithms for treatment

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of disease, and even the ultimate aims of clinical care to a certain extent. Modern medical technology has saved the lives of countless patients, but medical humanistic spirit has been gradually fading from medicine as a result of the fight against disease. This trend is due to several common phenomena: emphasizing the disease but ignoring patients; emphasizing the treatment but ignoring patient care; emphasizing lab tests but ignoring patients' subjective experiences; emphasizing physical recovery but ignoring psychological changes; and emphasizing the use of technology but ignoring ethical and social considerations (3-5).

The mindset that "medical technology comes first" leads to technology-oriented medicine that overlooks the humanistic spirit in medical practice. In the era of the biological-psychological-social medicine model, an exclusively technical-scientific approach to education is increasingly considered inadequate for the 21st century doctor. Any clinician who wishes to be fully prepared to understand and tackle many of the inevitable problems to come cannot avoid the concept that the aim of medicine is always the investigation of disease, and the clinician should always remember that the patient is a human being. An ideal of modern medicine is to enhance the humanities in medical education, to foster medical talents with humanistic spirit, and to promote the integration of medical scientific spirit and medical humanistic spirit.

## 2. Medical humanities and humanities in medical education

In the West, there is now a relatively long history of academic literature on medical humanities (Table 1), definable as an inter- and multidisciplinary field that explores contexts, experiences, and critical and conceptual issues in medicine and health care (6,7). As an interdisciplinary group of subjects, medical humanities includes philosophy, law, history, cultural studies, anthropology, religion, arts, and so on (8,9).

Research has shown that medical university students with a humanities and science background perform better

in practice than those with a science background alone (10). Medical humanities provide insight into the human condition, illness and suffering, the perception of one's self, professionalism, and responsibilities to one's self and to others, colleagues, and patients. All of the sciences in medical humanities are key to the quality education of future doctors. The medical humanities can have both instrumental and non-instrumental functions in a medical school curriculum (11). Humanities can have an instrumental function when directly applied to the daily work of the clinician. For example, study of the visual arts has been used to improve the ability of the clinician to recognize visual clinical signs of disease in a patient (12,13). The humanities also have a non-instrumental function when they lead to general education, personal development, or new ways of thinking beyond the biomedical perspective (14,15). For example, study of the humanities has been used to develop self-reflexivity and understanding of the role of the professional in society (16).

Medical humanities ought to be a source of encouragement, illumination, and understanding in support of the detailed manifestations of the idea of humane health care (17). Famed bioethicist Edmund Pellegrino suggested that the humanities should have a reasonable role in medicine. According to Pellegrino, the humanities should not be regarded as a sign of the gentlemanly character of a physician, a polite veneer overlying medical practice, or a sign of the physician's upbringing; instead, the humanities should be a basic component that physicians possess to make prudent and correct decisions, and that component should be as important as scientific knowledge and skills (18). Hence, humanities need to be added to the medical curriculum in light of moral and ethical dilemmas that clinicians face. In order for medical students to develop sensitivity to, empathy for, and understanding of the human condition, humanities must be incorporated into the existing curriculum to balance the largely scientific content, since such subjects act as a vehicle for exploring what it means to be human.

**Table 1. Three stages of development of medical humanities in the West**

Period: Stage	Typical events
End of 19th century ~ Mid-20th century: Initial appearance	<ul style="list-style-type: none"> <li>◆ From the end of the 19th century to the early 20th century, academic research began to focus on the interaction between medicine and society;</li> <li>◆ In 1919, William Osler put forward the concept of medical humanities scholars;</li> <li>◆ In the first half of the 20th century, the modern medical system was basically completed;</li> <li>◆ In 1948, Sutton pointed out that medical humanities had an important impact on medical development;</li> <li>◆ In 1951, Wick reaffirmed the important role of the humanities in medical education.</li> </ul>
Mid-20th century ~ End of 20th century: Rising tide of bioethics	<ul style="list-style-type: none"> <li>◆ The mid-20th century featured the turning point of modern medicine;</li> <li>◆ In the 1960s, there was reflection on the negative impact of scientific and technological development;</li> <li>◆ In 1969, the American Society for Health and Human Values was founded with the goal of including human values as a fundamental and definitive component of the education of health professionals;</li> <li>◆ Humanities education was gradually integrated into medical education.</li> </ul>
End of 20th century ~ The present: Globalization	<ul style="list-style-type: none"> <li>◆ Diversification and globalization of medical humanities;</li> <li>◆ Medical humanities education has become an important component of medical education reform;</li> <li>◆ The concept of a healthy humanity was proposed.</li> </ul>

### 3. Emphasizing humanities in medical education to foster medical talents with humanistic spirit

The goal of medical education is to train knowledgeable, compassionate, and well-informed physicians who will serve as healers and leaders by caring for the sick, acquiring medical knowledge, and promoting public health through service to the community and the nation. In the medical school curriculum, the medical humanities are intended to promote a way of being that incorporates personal convictions about one's obligations to others and to the development of a professional identity as a humanistic physician with personal attributes such as compassion, engagement, integrity, respect for patients, and a commitment to their own human flourishing (19,20).

Medical humanities can foster medical students' critical thinking as well as their understanding of personal values, empathy, cultural competence, leadership, and teamwork, thus preparing medical students to respond appropriately to complicated clinical problems (21). Since incorporating medical humanities into the medical education curriculum promotes the development of empathetic, compassionate, and culturally sensitive physicians, medical humanities are attracting greater attention as part of current medical education (9,22,23).

Medical humanities gained institutional recognition with the founding of the Institute of Medical Humanities of the University of Texas Medical Branch at Galveston (UTMB) in 1973 to ensure that humanities teaching and research became an integral part of the education of future scientists and healthcare professionals at UTMB (9). The multidisciplinary faculty of the Institute--who currently represent the disciplines of art, drama, history, law, literature, philosophy, and religious studies--teach in all four years of the undergraduate medical curriculum as well as in various residency programs. In addition to its focus on students and residents in the School of Medicine, the Institute has a vibrant graduate program in medical humanities with several joint degree options, including an MD/MA and an MD/PhD program, and the Institute has always included the School of Nursing, the School of Allied Health Sciences, and the Graduate School of Biomedical Sciences in its activities (24). Currently, 69 of 133 accredited schools in the United States (US) require that medical students take a course in the medical humanities (25).

In 1993, the General Medical Council in the United Kingdom (UK) also highlighted the importance of the humanities in medicine by suggesting its integration into the undergraduate medical curriculum to foster communication skills, study of ethical and legal issues relevant to clinical practice, respect for patients and colleagues, and patients' rights in all respects (26). Three professorial chairs are now established in the UK: at the University of Swansea in 'Healthcare and Medical Humanities', at the University of Durham in 'Humanities

in Medicine', and at King's College London in 'Medicine and the Arts'. Specialized degrees are offered by Leicester (MA in Medical Humanities), Swansea (MA and PhD programs in Medical Humanities), Bristol (BA in Medical Humanities) and by King's College London (MA in Literature and Medicine) (27).

Besides efforts in the US and UK, many medical universities in other Western countries, such as Canada, Germany, and Sweden, have already integrated the learning of medical humanities in their curricula and recognized their value (28-31).

In Japan, there are currently 79 undergraduate medical schools, including 50 national/prefectural ones and 29 private schools (32). Japanese medical education is 6 years in duration, typically consisting of 2 years of general liberal arts, 2 years of pre-clinical education, and 2 years of clinical education. Most medical students in Japan are fresh graduates from high schools. Although college graduates are also allowed admission at 36 schools, they account for fewer than 10% of incoming students (32,33). In Japan, the core curriculum for humanities in medical education includes medical ethics and bioethics, a patient's rights and informed consent, a doctor's obligations and responsibilities, medical safety and risk management, communication and group medical care, and problem-solving and logical thinking. According to the White Paper on Medical Schools in Japan published by the Association of Japan Medical Colleges in 2007 (34), 92% (73/79) of medical schools have provided medical humanities education, and 2 schools were preparing to do so. Around 80% of the medical schools created medical humanities courses for incoming students, and 40% did so in the second or fourth year of undergraduate study. In Japanese undergraduate medical education, the first 2 years primarily focus on general education, while the latter years focus on professional medical education and clinical education. Among the medical schools, 29 established a medical ethics courses, 14 provided a course in doctor and patient communication, and 11 provided courses related to literature and medicine, medical anthropology, professional ethics of physicians, and the doctor and patient relationship.

Since the advent of the 21st century, medical humanities has become more diverse and more globally oriented, with increasing attention to exchanges and dialogues between different cultures. This has meant that medical humanities education has become an important part of medical education reform. A 2010 Carnegie Foundation report called for changes in the medical curriculum, insisting that clinical education become more learner-focused and experiential and that clinical training be merged with social sciences and humanities to develop professional values and to encourage students to take a "holistic view of the patient experience" (35). In 1998, with the approval of the World Health Organization and the World Medical Association, the World Federation

for Medical Education initiated a program entitled the "International Standard for Medical Education". Pursuant to this program, the "Global Standard for Undergraduate Education" was enacted in 2003 and revised in 2013 (36). The "Global Standard for Undergraduate Education" implies that core medical courses should include both basic medical theory and medical practice, and especially basic biomedical, behavioral, and social sciences, basic clinical skills, clinical decision-making skills, communication skills, and medical ethics. These core courses should be established at all medical schools to foster competent medical practitioners.

#### **4. Emphasizing humanities in medical education is one of most pressing issues China faces**

Since the 1980s, instruction in and research on medical humanities has increased at many medical colleges in China. Teachers and researchers in medical history, natural dialectics, medical ethics, and political theory created a number of medical humanities courses and they developed new areas of research, such as medical cultural anthropology, bioethics, medical aesthetics, and medical literature. Instruction in and research on medical humanities has attracted growing attention from the rest of society. In 2002, the Chinese Ministry of Education held an international symposium on medical education standards to study international standards for medical education and to determine how to adapt international standards to practical research work in China. In 2008, the Ministry of Education and the Ministry of Health jointly issued the "Undergraduate Medical Education Standards - Clinical Medicine (Trial program)" (37), which clearly advocates enhancing "behavioral science, humanities and social sciences, and medical ethics courses." The Standards are attempting to comprehensively improve the humanity of and social interaction by medical students in an attempt to foster the next generation of medical and health personnel to develop medical science and provide care.

In line with national guidelines, medical education reform in China over the past decade has emphasized topics such as medical humanities, life-long learning, and patient-centered learning in an effort to increase the professionalism of future physicians. However, the integration of medical humanity courses in Chinese medical universities has lagged behind the pace in Western countries (38-40). Although some colleges and universities in China have established institutes or centers of medical humanities, such as the Institute of Medical Humanities of Peking University that was founded in 2008, most schools have not yet established an independent system for medical humanities education (41). In Europe and the US, new disciplines are mostly created in the form of projects/programs. Interdisciplinary projects/programs like medical humanities are mostly implemented by teachers from different faculties, and the

programs cover course instruction, academic research, and postgraduate training. After a certain period, a special or independent organization will emerge, and this flexible model is conducive to the development of new disciplines. China places considerable emphasis on distinct disciplines, but medical humanities scattered in the disciplines of philosophy, sociology, political theory, education, and traditional Chinese medicine.

In addition, current courses in medical humanities were arbitrarily established due to a lack of organizational independence. For various reasons like a shortage of instructors, medical universities have failed to pay sufficient attention to medical humanities education given the urgent needs of society. In the medical curriculum, humanities account for less than 5% of a student's university education. Moreover, research concerning the current state of humanities education revealed that 55.26% of students chose humanities courses only to earn academic credit (42). Courses related to medical humanities, including medical history, medical ethics and law, patient-physician communication, and medical social science, are often considered to be electives, so they are thus ancillary and less important than core courses. These courses tend to be taught separately, with little integration and no overall consideration of their position in the curriculum. Another major issue is the faculty in Chinese medical universities, where lecturers are more likely to specialize in law, psychology, or social sciences but rarely in medicine. Moreover, the current curriculum emphasizes theory but ignores practice. Medical schools are not concerned about the importance of medical humanistic spirit and practice, so they thus fail to include medical humanities in the evaluation system. In light of the urgent need for development of medical humanities, the field has a long way to go in China.

A relatively ideal system of medical humanities education has been established in Europe and the US. Drawing on that example, the following three aspects of medical humanities education should be promoted in China: *i*) new nationwide goals for medical education should be established and the integration of medical science spirit and medical humanistic spirit should be promoted; *ii*) reasonable integration of humanities into the medical curriculum should be vigorously promoted, medical courses related to the humanities should be created, and the curriculum should be optimized; and *iii*) actively allocating abundant teaching resources and exploring better methods of instruction, including problem-based learning, case-based learning, task-based learning, and online teaching and learning.

#### **5. Conclusion**

The integration of humanities education and medical education is already occurring around the world. Incorporating humanities education in medical education

and fostering competent medical talents with profound humanity are the acknowledged goals of such efforts worldwide. Biomedical technology alone cannot solve the medical problems in contemporary Chinese society. Aspects of and flaws in the social and political culture pose bigger obstacles, and a multi-faceted, multi-disciplinary system of knowledge is needed to overcome those obstacles. Only under the guidance of medical humanistic spirit, medical science can shed its predilection for medical technology and instead provide humane care. This approach is the only way modern medicine can stay true to its original mission of humanely caring for others.

Emphasizing the humanities in medical education and promoting the integration of medical scientific spirit and medical humanistic spirit have become one of the most pressing issues China must address. Greater attention should be paid to reasonable integration of humanities into the medical curriculum, creation of medical courses related to humanities and optimization of the curriculum, and actively allocating abundant teaching resources and exploring better methods of instruction.

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