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EDUCATION AND LICENSING OF TRADITIONAL CHINESE DOCTORS IN CHINA

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Summary

Traditional Chinese medicine (TCM) is an integral part of Chinese health care. Traditional Chinese doctors and practitioners of modern medicine are subject to the same set of regulations regarding education, licensing and continuous education. Due to the constantly growing interest in TCM and especially its education and licensing procedures, this article describes the systems of education, licensing and continuous education currently used in the People's Republic of China.

The education of traditional Chinese doctors in China is modernized and institutionalized. Its two mainstays are university education and continuous education. Traditional structures of education, the strong emphasis on clinical practice and person-to-person teaching are also integrated into this system. The education and practice of TCM in China do not differ structurally from those of modern medicine. Students of TCM are required to learn modern medicine and are examined in modern medicine during their studies and upon the physicians' qualification exam. TCM doctors use the methods of modern medicine in conjunction with TCM during their everyday work. Traditional Chinese doctors are an essential part of the Chinese health-care system and there is an increasing international demand for TCM professionals trained according to this model.

Key words: traditional Chinese medicine, TCM, education, licensing, People's Republic of China

TRADITIONAL CHINESE MEDICINE

Traditional Chinese medicine has a set of characteristics which define its everyday practice in clinical work and education as well, and with which the reader should be acquainted. The two most unique characteristics of TCM are "holism" (zheng ti guan nian) and "treatment defined by pattern identification" (bian zheng lun zhi). The term "holism" denotes an axiom according to which the complex processes of the human body entail constant innumerable interactions, thus necessitating the usage of functional models, through which the momentary condition of the human organism may be described in its entirety instead of emphasizing the examination of minute structural details. Treatment based on "pattern identification" is the conclusion of this axiom: the patterns, categories and states arrived at through the usage of such functional models become the definitive bases of all applied therapy. It is thus possible that within the nomenclature of TCM a given disease as defined by modern medicine can be classified into further subgroups with different principles of therapy and different modes of treatment for each sub-group.

Besides these two fundamental theoretical principles TCM also has the following characteristics: it has unique therapeutic procedures (acupuncture, Chinese manual therapy, individualized multi-componential herbal therapy, etc.), it places great emphasis on prevention, and due to the past two millennia of state patronage it also has a very rich corpus of literature, which constitutes an

integral part of a continual, living tradition and which is a great pool of currently relevant clinical experience.

THE ROLE OF TRADITIONAL CHINESE MEDICINE IN CHINA

Before the modern period traditional Chinese medicine was the official medical system of China. As early as 1500 years ago, systematic education and research were conducted in the imperial courts of China and this institutionality continued until the end of the imperial period (1911). From the second half of the 19th century modern medicine became more and more prevalent in China.

Proclamation of the People's Republic of China (1949) saw the introduction of the current system, in which traditional Chinese medicine is on an equal level with modern medicine (1). There are hospitals specializing in Chinese medicine and at the same time numerous modern medicine type hospitals feature TCM wards. There are departments in TCM hospitals where modern medicine is used almost exclusively, like in the intensive care units. Universities also share this structure. In China – as far as medical universities go – there are TCM universities and modern medical universities, the latter much like the ones we know in the western world. Subjects of western medicine are taught within the curricula of TCM universities. Most universities dedicated to modern medicine also feature TCM departments. Thus the two different medical systems have a symbiotic relationship within one integral health-care system. Traditional Chinese Medicine provides 10-20% of health care

services in China (2). TCM related research has been a great driving force behind the development of Chinese health care and international scientific relations.

TRADITIONAL CHINESE MEDICINE IN CHINA'S SYSTEM OF EDUCATION

Traditional Chinese medicine has two models of education. One is the traditional master-apprentice model, which used to be the main method of teaching in historic times. The other is university tuition, which has become the main mode of TCM education.

Chinese university education is divided into three levels: bachelor's, master's and PhD levels. Undergraduate education for traditional Chinese doctors takes 5 years and contains about 5000 hours. This may be followed by graduate and post-graduate studies, of 3 years duration each. Undergraduate TCM education is divided into majors, according to fields of specialization. The most important majors are: traditional Chinese medicine major (with emphasis on training clinicians using herbal therapy), acupuncture-manual therapy major, traditional Chinese pharmacology major, etc. There also exist TCM vocational schools offering 3-year academic programs.

In China there are currently 23 independent institutions of TCM higher education: 12 universities and 13 colleges. Besides these, 58 other universities have TCM colleges, departments or programs. 45 TCM vocational schools and TCM training in 184 other vocational schools complement these universities. Currently 270 000 students study Chinese medicine in China, 150 000 of whom are undergraduate university students and 23 000 graduate or post-graduate students (3).

EDUCATION OF TRADITIONAL CHINESE DOCTORS IN CHINA

The main principles of TCM education according to the Chinese Ministry of Education and the State Administration of TCM as stated in the Basic requirements of undergraduate TCM education (2008) are as follows (3). The most basic aim of traditional Chinese medical education is the training of TCM professionals who have a systematic knowledge of the theories of Chinese medicine, who have specialized proficiency in TCM's diagnostic and therapeutic methods, who are in command of a complex and reasonably structured system of knowledge, who are versatile, innovative and practical and can perform TCM therapeutic, educational and research duties.

The requirements for "traditional Chinese medicine" majors and "acupuncture-manual therapy" majors are similar, with slight differences. In the 5-year undergraduate program the general requirements for both majors are that the student systematically master TCM's fundamental theories, basic therapeutic and diagnostic techniques, that the student master a part of modern medicine's basic knowledge and a part of modern medicine's therapeutic and diagnostic methods, that the student become familiar with TCM clinical thinking,

that the student obtain proficiency in clinical skills, that the student be able to apply the methods of both TCM and modern medicine in the treatment and prevention of common diseases, that the student learn to obtain knowledge independently and be able to participate in certain research tasks. Such students, upon successfully passing the final exams, receive the bachelor of medicine degree. For "traditional Chinese medicine" majors the emphasis is placed on mastering the clinical usage of herbal therapy, especially in diseases of internal medicine, but also including emergency medicine. For "acupuncture-manual therapy" majors greater emphasis is placed on acupuncture and manual therapy, especially their applications in the fields of neurology, orthopedics and rehabilitation.

TCM university education consists of four modules: general subjects, basic subjects, major subjects and clinical practice. Tables 1-4 list the compulsory subjects learned by undergraduate students majoring in "traditional Chinese medicine" and "acupuncture-manual therapy".

The key to successful education in the field of TCM is constant clinical practice, starting early and focusing on key subjects. It is especially important that students learn the mode of clinical thinking peculiar to traditional Chinese doctors. Thus all subjects have a clinical component starting from the first year. A thorough knowledge of the medical classics is also essential, as this constitutes the theoretic background necessary for the application of the various clinical techniques. In the clinical training phase a tutor system based on the traditional master-apprentice model is applied, which gives students direction and constant supervision throughout their clinical studies.

LICENSING TRADITIONAL CHINESE DOCTORS IN CHINA

Widespread application of an examination system for medical practitioners started in the Yuan period (1206-1368). It was then that Chinese law first made examinations a prerequisite for medical practice. By the end of the Qing period (1644-1911) a whole system of examinations had evolved: only those passing the licensing exams could legally practice medicine. The current system was introduced in 1999, with the Law on licensed doctors of the People's Republic of China, which makes licensing examinations a prerequisite for medical practice (4). This law regulates the licensing, registration, practice conditions, education requirements and legal obligations of physicians in China. It stipulates that a satisfactory score in the qualifying examination is the prerequisite of physicians' registration and medical practice. This law does not recognize any difference between doctors of modern medicine and doctors of traditional Chinese medicine with regard to requirements and obligations.

According to this law, China uses a "physicians' registry system". Registered physicians can practice medicine according to the geographical location and

Table 1. General subjects.

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| Foreign language (English, Russian, Japanese), medical ethics, basic law, moral education, physical education, philosophy, political-ideological studies |
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Table 2. Basic subjects.

| Traditional Chinese medicine major | |
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| Subjects of modern medicine | <ul style="list-style-type: none"> • medical biology • anatomy • physiology • pathology • microbiology • immunology • pharmacology • medical genetics |
| Subjects of traditional Chinese medicine | <ul style="list-style-type: none"> • Introduction to Chinese medicine • Introduction to reading Chinese medical classics • Basic theories of Chinese medicine • TCM herbology • TCM herbal formulas • Reading the Yellow Emperor's Inner Canon • Reading On cold damage • Reading Essential prescriptions from the golden coffer • Reading classics from the "school of warm diseases" • TCM diagnostics |
| Acupuncture-manual therapy major | |
| Subjects of modern medicine | <ul style="list-style-type: none"> • medical biology • anatomy • physiology • pathology • microbiology • immunology • pharmacology • medical genetics • neuro-localizational diagnostics (propedeutics of neurology) |
| Subjects of traditional Chinese medicine | <ul style="list-style-type: none"> • Basic theories of Chinese medicine • TCM herbology • TCM herbal formulas • Reading On cold damage • Reading Essential prescriptions from the golden coffer • TCM diagnostics • Channels and acupoints • Acupoint anatomy • Puncture and moxibustion techniques • Manual therapy techniques |

field of work designated upon registering. Medical practice without registration is illegal. The prerequisite of registration and thus obtaining a license is a satisfactorily completed national physicians' qualification examination.

Table 3. Major subjects.

| Traditional Chinese medicine major | |
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| Subjects of modern medicine | <ul style="list-style-type: none"> • Internal medicine • Surgery • Gynecology-obstetrics • Pediatrics • Emergency medicine |
| Subjects of traditional Chinese medicine | <ul style="list-style-type: none"> • TCM internal medicine • TCM surgery • TCM gynecology • TCM pediatrics • TCM traumatology • Acupuncture • Manual therapy |
| Acupuncture-manual therapy major | |
| Subjects of modern medicine | <ul style="list-style-type: none"> • Internal medicine • Surgery • Gynecology-obstetrics • Neurology • Rehabilitation medicine |
| Subjects of traditional Chinese medicine | <ul style="list-style-type: none"> • TCM internal medicine • TCM gynecology • TCM pediatrics • TCM traumatology • Acupuncture therapy • Applications of manual therapy |

Table 4. Clinical practice.

| Traditional Chinese medicine major |
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| 3rd year: 9 weeks practice in TCM internal medicine |
| 5th year: one year rotation practice in: <ul style="list-style-type: none"> • TCM internal medicine • TCM surgery • TCM pediatrics • TCM gynecology |
| Acupuncture-manual therapy major |
| 3rd year: 9 weeks practice in TCM internal medicine and acupuncture |
| 5th year: one year rotation practice in: <ul style="list-style-type: none"> • TCM internal medicine • TCM gynecology • acupuncture • manual therapy • neurology • rehabilitation |

The goal of the physicians' qualification exam is to ascertain whether the examinee has the necessary knowledge and skill to practice medicine or not. Qualification exams are divided into two levels: "practicing physician" and "practicing assistant-physician". A practicing assis-

tant-physician may only practice medicine under the supervision of a practicing physician. Assistant-physicians practicing in rural administrative regions and villages are exempt from this rule and can practice medicine independently without supervision. Qualification exams are divided according to areas of specialization. There are three kinds of “traditional Chinese medicine” qualification exams: traditional Chinese doctor, integrated modern-traditional doctor and doctor of minority medicines (this latter includes Mongolian, Tibetan, Uyghur and Dai medicines, all which are wholly different from Chinese medicine).

Only those meeting one of the requirements listed in table 5 may participate in TCM-type physicians’ qualification exams.

Those wishing to participate in the TCM-type assistant-physicians’ qualification exam must meet one of the requirements listed in table 6.

The contents and proceedings of the qualification exams are regulated by the Ministry of Health. The exams are made up of two main components: a general written examination of medical knowledge and technical demonstration of clinical skills. The general written examination is a nationally standardized exam and – in the case of TCM-type examinations – is organized by the State Administration of Traditional Chinese Medicine. The contents of the technical demonstrations are always defined by the National Medical Examinations Center and the State Administration of Traditional Chinese Medicine. The demonstrations themselves are conducted by provincial examination authorities.

The technical demonstration part of TCM-type qualification exams are made up of three stages. In the first

Table 5. Requirements for physicians’ qualification exam.

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| bachelor of medicine degree 1 year clinical practice under the supervision of a practicing physician |
| assistant-physician’s license vocational diploma 2 years clinical practice under the supervision of a practicing physician |
| assistant-physician’s license “documented master-apprentice” diploma 5 years clinical practice under the supervision of a practicing physician |

Table 6. Requirements for assistant-physicians’ qualification exam.

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| vocational diploma 1 year supervised clinical practice |
| “documented master-apprentice” diploma 1 year supervised clinical practice in the institution of health care issuing that diploma |

stage the examinee must demonstrate “syndrome-differentiation” skills by an independent analysis of a case study. Based on the provided clinical data the examinee must determine the etiology, pathomechanism, location and nature of the illness, must perform a differential diagnosis, give diagnoses according to both TCM and modern medicine, must determine the principles of treatment according to TCM and write an herbal prescription containing the names, quantities of its components, directions for preparation and administration and provide any further necessary therapeutic or diagnostic specifications. The second stage requires the examinee to demonstrate basic clinical skills, including physical examinations and therapeutic and diagnostic procedures of both TCM and modern medicine. The third stage is an oral interview, during which members of the examination board ask the examinee questions pertaining to clinical knowledge.

The general written examination of medical knowledge is nationally centralized. TCM-type qualification exams consist of questions related to the subjects listed in table 7. For the sake of objectivity all questions are multiple choice questions. The practicing physician exam consists of 640 questions, whereas the practicing assistant-physician exam consists of 300 questions.

CONTINUOUS EDUCATION OF TRADITIONAL CHINESE DOCTORS IN CHINA

All physicians practicing medicine in China are subject to a system of continuous education in order to ensure the constant development of their knowledge. Participation in continuous education is a basic right and obligation to which traditional Chinese doctors are no exception. The continuous education of TCM doctors is regulated by the TCM Continuous Education Decree issued in 2006 by the State Administration of TCM (5).

Continuous education programs may be organized by the State Administration of TCM, any of its province-level branches, TCM institutions or associations, but all

Table 7. Subject requirements for TCM-type physicians’ qualification exams.

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| General subjects | <ul style="list-style-type: none"> • medical ethics • medical law |
| Subjects of traditional Chinese medicine | <ul style="list-style-type: none"> • Basic theories of Chinese medicine (including classic medical literature) • TCM herbology • TCM herbal formulae • TCM diagnostics • TCM internal medicine • TCM surgery • TCM gynecology • TCM pediatrics • Acupuncture |
| Subjects of modern medicine | <ul style="list-style-type: none"> • Diagnostics • Internal medicine • Infectology |

have to be accredited by a county-level or higher Continuous Education Committee of TCM.

Continuous education programs include: study courses, research groups, master-apprentice programs, lectures, on-line programs, conferences, etc. Research conducted for scientific papers and individual studies conducted according to previously approved study plans and concluded by examinations may also be accredited as continuous education programs. Participants are obliged to register in advance in order to obtain credit points for participation. Registration involves detailing the name, time, duration, type, point value and other specifics of the program.

The Chinese system of continuous education is based on the collection of credit points. Those registering properly and successfully completing a program receive credit points. Traditional Chinese doctors are required to obtain 25 credit points each year. Obtaining the required number of credit points is one of the most important prerequisites of renewing the registration needed for medical practice.

SUMMARY

Currently the education of traditional Chinese doctors in China is strongly modernized and institutionalized. Its two mainstays are university education and continuous education. Nevertheless, the traditional structures of education, the strong emphasis on clinical practice and person-to-person teaching, which constitute an essential part of TCM, are also integrated into this system. The education and practice of TCM in China do not differ structurally from those of modern medicine and thus easily fit international standards. Students of TCM also

learn modern medicine and are examined in modern medicine in the physicians' qualification exam. TCM doctors use the diagnostic and therapeutic methods of modern medicine in conjunction with those of Chinese medicine during their everyday work. Traditional Chinese doctors are an essential part of the Chinese health-care system and there is an increasing demand for thoroughly trained, versatile TCM professionals graduating from the Chinese model of TCM education.

Heilongjiang University of Chinese Medicine has launched a new satellite training facility at the College of Health Sciences of Semmelweis University in 2010. Now the 5-year undergraduate TCM education detailed in this article is available in Budapest, Hungary! □

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