



Research Article

THE MOST CONCISE CURRICULUM SYSTEM FOR APPLIED UNDERGRADUATE CLINICAL MEDICINE IN CHINA

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ABSTRACT

To formulate a curriculum system for applied undergraduate clinical medicine in China, Chinese applied medical school should adhere to the principles of science, rationality and practicality, guided by the *Outline of the National Entrance Examination of Comprehensive Western Medicine for Master of Clinical Medicine* and *two outlines*, to formulate a curriculum system. The system includes basic medicine, clinical medicine, preventive medicine and humanistic medicine, including 29 compulsory courses with more credits, harder and stricter examinations (including 7 core compulsory courses), 10 elective courses with less credits, simple and easy examinations. If the undergraduate students of applied clinical medicine can study seriously and efficiently, and fully meet the requirements of this curriculum system, these students can easily pass the entrance examination for master of clinical medicine and the medical licensing examination, and even those who do not learn well can easily pass the recruitment examination of class II grade B hospital in China and the medical licensing examination. If this can be done, the applied medical schools can successfully cultivate applied clinical medicine undergraduate talents who can meet the needs of hospitals and are easy to obtain employment, or provide clinical medicine graduate students for higher medical schools.

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INTRODUCTION

Chinese medical schools can roughly be divided into two categories: research medical school and applied medical school. The former is much higher in term of students' qualities, teaching level and social reputation^[1].

In China, a five-year clinical medicine undergraduate student usually experience several important examinations to him—he can enter himself for master entrance examination of clinical medicine at the end of the first semester of grade five. If he fails, he usually takes hospital recruitment examinations for jobs. If he want to get jobs, he must take a 3-year standardized residency training program in China^[2]. One year after his graduation, no matter he is a postgraduate of clinical medicine in grade one or a resident, he must take Medical Licensing Examination if he want to become a legal doctor^[3].

The master entrance examination of clinical medicine is based on the *Outline of the National Entrance Examination of Comprehensive Western Medicine for Master of Clinical Medicine*.

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According to the outline, the courses of the exam are biochemistry, physiology, pathology, diagnostics, internal medicine, surgery and medical ethics. The exam is somewhat difficult and highly competitive—its passing rate is as low as 25%^[4-6].

Medical Licensing Examination, starting from 1999, is based on the *Outline of the Qualification Test for the Medical Practitioners* (the Outline of comprehensive written examination) and the *Outline of Clinical Skill Test* (abbreviation *two outlines*). It's not very easy to pass the examination—in recent years, its passing rate has ranged from 20% to 32%^[7-11].

To a clinical medicine undergraduate student in applied medical schools, passing the above mentioned examinations means he can become a master in a medical school with higher academic degree or get a job at least, i.e. his undergraduate studying is succeed. So, Chinese applied medical school should adhere to the principles of science, rationality and practicality, guided by the *Outline of the National Entrance Examination of Comprehensive Western Medicine for Master of Clinical Medicine* and *two outlines*, to formulate a

curriculum system which adapt to their situations and meet social and clinical medicine undergraduate students' needs.

1 The main contents of the curriculum system

1.1 Main disciplines Basic Medicine, clinical medicine, preventive medicine and humanistic medicine.

1.2 29 compulsory courses

Including

- ✓ Basic medicine: medical biology, systematic anatomy, regional anatomy, histology and embryology, biochemistry, physiology, medical microbiology, medical immunology, pathology, pharmacology, pathophysiology, medical psychology.
- ✓ Clinical medicine: diagnostics, medical imaging, internal medicine, infectious diseases, dermatovenereology, neurology, psychiatry, surgery, obstetrics and Gynecology, pediatrics, internal medicine (including diagnostics, infectious diseases, neurology, psychiatry) practical skills, surgical practical skills, obstetrics and Gynecology practical skills, pediatric practical skills.
- ✓ Preventive medicine: preventive medicine.
- ✓ Humanistic medicine: health law, medical ethics. There should be more class hours and credits and the examination should be difficult and strict. Among them, there are 7 core compulsory courses, including biochemistry, physiology, pathology, diagnostics, internal medicine, surgery and medical ethics, which are the contents of the master entrance examination of clinical medicine and the emphasis of medical licensing examination. More class hours should be arranged for these core compulsory courses, and the examination should reach the difficulty degree of the entrance examination for master of clinical medicine.

1.3 10 elective courses

Including

- ✓ Basic medicine: organic chemistry, human parasitology.
- ✓ Clinical medicine: ophthalmology, otolaryngology head and neck surgery, stomatology, nuclear medicine, traditional Chinese medicine, general medicine.
- ✓ Preventive medicine: epidemiology, hygiene. The class hours and credits should be less, and the examination can be simple and easy^[4,7-8].

DISCUSSION

Compared with other majors such as art and humanity, science and engineering, clinical medicine major has more curricula. So many curricula are heavy burdens on clinical medicine undergraduate students, especial those in applied medical schools whose learning interest and learning ability are limited. In fact many curricula, for example *Hospital Management*, *Medical Sociology*, are redundant to an applied clinical medicine undergraduate student who maybe has been being afflicted by not being well at learning the main curricula such as internal medicine and surgery yet^[12].

Furthermore, as high education is shifting from elite education to mass education in China^[13].lengthy and unnecessary curricula system for applied undergraduate clinical medicine

become obsolete. In the US, cutting years during college or medical school should be a preference^[14].Many medical schools and residency and fellowship programs have already shortened their training in various ways, definitively demonstrating that these added years are not essential to training high-quality, knowledgeable practitioners. Medical training can be shortened by 30%^[15].So, more concise curriculum system is urged to meet the social and clinical medicine undergraduate students' needs in China. The above curriculum system of applied clinical medicine undergraduate is based on the actual situation of applied clinical medicine undergraduates, cover the requirements of *two outlines* and *the Outline of the National Entrance Examination of Comprehensive Western Medicine for Master of Clinical Medicine* ^[4,7-8], contains the most of the core subjects recommended for UK medical schools as well^[16].It lays an essential foundation for further learning and practice in various health care institutions for the medical students^[17]. meets the needs of the clinical practice of hospitals to clinical medicine undergraduate students, and fully embodies the principles of science, rationality and practicality.

If the undergraduate students of applied clinical medicine can study seriously and efficiently, and fully meet the requirements of this curriculum system, these students can easily pass the entrance examination for master of clinical medicine and the medical licensing examination, and even those who do not learn well can easily pass the recruitment examination of class II grade B hospital in China and the medical licensing examination, both of which consist of clinical skill test. If this can be done, the applied medical schools can successfully cultivate applied clinical medicine undergraduate talents who can meet the needs of hospitals and are easy to obtain employment, or provide clinical medicine graduate students for higher medical schools. Their reputation in the society can be enhanced greatly and ultimately a win-win situation between students and schools is achieved^[17,18].

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Conflicts of interest

All contributing authors declare no conflicts of interest.

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