Establishing a Core Medical Informatics PhD Program Curriculum in China

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Abstract

The lack of medical informatics education and research infrastructure in China remains a major barrier both to the development of medical informatics as a discipline and high level medical informatics education. This paper introduces a core medical informatics PhD program curriculum in China, which will foster knowledge, skills, and abilities needed by current and future medical informatics leaders in professional applications. The PhD program will also minimize background differences from students with different professional training.

***Keywords**:*

Medical informatics, Interdisciplinary, Education, Core curriculum.

Introduction

Health and medical informatics is of particular importance at the beginning of 21st century. However, the literature focused on medical informatics education in China is limited. West China School of Clinical Medicine, Sichuan University began offering doctoral medical informatics courses in 2008. This is the first program in medical informatics (100227) in China The initiative to create an interdisciplinary curriculum that outlines the relevant topics within medical informatics began in 2006.

Methods

Principle of Curriculum

For developing the curriculum, we feel it is essential to shape the PhD degree program to align with the career goals of the student. The students will develop key skills with individualized multidisciplinary training, in addition to facilitate their participation in research and development activities.

Curriculum theory

We applied the curriculum theory including: research-oriented graduate programs, objective-oriented graduate programs, discussion method, problem-based learning, self-directed learning, information literacy, dealing with student diversity, forms and functions of assessment, dichotomies of informatics education, learning outcomes, PDCA(Plan-Do-Cheek-Act),and recommendations of IMIA on education in health and medical informatics,etc.

Building interactive interprofessional teamwork

According to Chinese traditional culture, we built interprofessional teamwork. Interdisciplinary work to be effective, members of the collaboration must recognize that cultural differences exist between and within disciplines.

Joint International Course in Medical Informatics

Course committee designed the curriculum both English and Chinese. The students should be trained to meet the demands of an increasingly international health care environment.

Curriculum evaluation and revision

There are several ways to evaluate and revise the curriculum and teaching : student feedback, self-evaluation, peer observation, viewing a videotape of your teaching, consultation with a faculty colleague or a consultant from Instructional Development Services.

Results

The core medical informatics curriculum was designed by an interprofessional workteam in 2006. Based on core medical informatics curriculum, we published the book of “concise medical informatics” to meet the need of Chinese students. The book (available in English and Chinese) is written as a text so it can be used in a formal course (3 credits). The PhD degree requires approximately 48 hours of formal class work with a grade of B or better.

Discussion and conclusion

The primary motivation of the proposed curriculum is to explore minimum level competencies required for each level and knowledge/skill domain and carry out teaching reforms and textbook construction of medical informatics in China. We hope the core medical informatics PhD program curriculum can be identified and used as a framework.

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