

Family Medicine Training in China

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BACKGROUND AND OBJECTIVES: In 2010, six ministries of the Chinese government jointly issued a plan for building team-based primary care led by family physicians, prompting the creation of new models of family medicine training across the country. The purpose of this paper is to describe examples of existing family physician training models in China, to present advantages and disadvantages of the various models, and to present a specific model of family medicine residency training implemented at the Zhejiang University Medical School-affiliated Sir Run Run Shaw Hospital in collaboration with the Michigan State University-affiliated Genesys Regional Medical Center.

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The Chinese medical education system differs greatly from the American medical education system. Most Chinese medical students are recruited directly from high school following a standardized college entrance examination. Students rank colleges and universities, and are matched based on merit. The length of post-secondary medical training is 3, 5, 7, or 8 years.¹⁻⁴ Three-year programs are equivalent to a physician assistant program in the United States. However, few medical schools offer 3-year programs. Students with 5 years of medical education receive a bachelor of medicine degree, and those with 7 or 8 years of medical education are awarded a master's or doctoral degree in medicine, respectively.⁵

Irrespective of length of medical education, all are considered medical students until they graduate from their respective programs. To graduate and practice as an independent physician, each student must pass a

final written examination offered by the national government. Generally, over the past 15 years, medical graduates with a 5-year degree work in rural community clinics while those with 7- and 8-year degrees work in hospitals and become subspecialists. Those with a 3-year degree work under a licensed physician but can become independent physicians after several years of practice and successful completion of a series of examinations. Increasingly, students are enrolling in 7- and 8-year programs.

Until recently, a structured, standardized residency training program did not exist for any specialty. Family medicine is the first specialty to begin a 3-year residency program similar to an Accreditation Council for Graduate Medical Education (ACGME)-accredited family residency program in the United States. The majority of medical school graduates, including general practitioners, are trained through an apprenticeship model, and their competency is

evaluated solely by their mentors. This paper describes the different types of family medicine training in China using sources such as literature and Internet reviews from both China and the United States and direct observations from the Chinese and American faculty involved in training programs in China.

Primary Care in China

As a result of recent social and economic development in China and the strong evidence base supporting the relationship between primary care and improved health outcomes, Chinese health authorities have recognized the value and importance of accessible, continuous, coordinated, and comprehensive care.^{6,8} Additional factors promoting family medicine in China include the aging of the population, increased urbanization, increased infectious and chronic disease, and rising costs of health care.⁹ In an effort to achieve better primary care, the Chinese government has been heavily investing in improving the infrastructure of rural clinics, community health centers, and hospitals. Despite all of these efforts, consistently high-quality,

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rigorous medical training for family physicians and other primary care providers is lagging.¹⁰ A shortage of well-trained family physicians and other primary care providers in rural areas and a lack of easily accessible continuing medical education have posed additional challenges to improving the quality of care. Consequently, six ministries of the Chinese central government jointly issued a plan for building family physician-led primary care teams.

Current Models of Family Medicine Education in China

Although there are several established primary care physician development programs nationwide,¹¹⁻¹⁵ these programs lack uniformity, consistency in training, and overall quality. Examples of existing models include (see Table 1):

Free Training for Medical Students Serving Underserved Regions of China

To address health care provider shortages in rural areas of China, particularly in central and western regions, the Development and

Reform Commission of China implemented a free training program for medical students.¹⁶ Participating medical students must agree to practice in an underserved area for at least 6 years after graduation. The training is for a 5-year medical degree and includes free tuition and accommodation and a discounted meal plan.¹⁻⁴ Five thousand medical students from 24 provinces, including autonomous regions and municipalities in the central and western regions of China, have been enrolled in 51 medical schools through this program.¹⁷

Retraining Existing Practicing Physicians to Become Family Physicians

According to the 2010 China Health Statistics Yearbook, in 2009, the total number of practicing physicians and physician assistants in China was 2,329,206, of which 123,448 or 5.3% are family physicians and family physician assistants.¹⁸

To increase the number of well-trained, qualified family physicians and to provide high-quality primary care for rural areas, 50,000

practicing physicians and physician assistants have been selected by provincial governments to be retrained. The retraining period is for 1 year (full-time) or 2 years (part-time) in hospital-based family medicine residency training programs affiliated with a medical school or university.^{11,12,19} Financial support for this training is provided by the local and provincial governments.

The training format includes lectures in small groups, interactive case presentation and discussion of patients, small-group discussion, role playing, simulation training, and demonstrations of procedures.¹³ Alternatively, physicians may elect supervised self-study following successful completion of all requirements within a family medicine residency department. Retraining of practicing physicians has been carried out in Beijing, Shanghai, Guangdong, and other areas.^{11,12,19}

Standardized Family Medicine Residency Training

Medical students interested in family medicine, generally from 5-year programs, may enter into a family

Table 1: Advantages and Disadvantages of Family Medicine Training Models

Training Models	Advantages	Disadvantages
Free training for medical students serving underserved areas	<ul style="list-style-type: none"> • Provides tuition to students from underserved areas • Increases medical services in rural and other underserved areas 	<ul style="list-style-type: none"> • Absence of practical clinical experience
Family doctor retraining	<ul style="list-style-type: none"> • Transitional measure to establish family medicine in the community setting • Retrained community physicians have clinical experience and can quickly become family physicians and serve the community 	<ul style="list-style-type: none"> • Family medicine training period is too short • Quality of the training is not standardized and often only theoretical or simply a combination of rotations in various specialties
Standardized training after graduation	<ul style="list-style-type: none"> • Standardized postgraduate curriculum. • Residents are rigorously trained by faculty trained in family medicine. • Residents benefit from training in both inpatient and outpatient settings at the hospital as well as at community health centers 	<ul style="list-style-type: none"> • Due to inequalities in resident salary, in recognition of academic training, and in future employment options, as compared to other medical specialties, family medicine residency programs do not currently attract the most competitive students

medicine residency training program following graduation from medical school. The total length of the training is 36 months²⁰ and consists of three parts: (1) didactic instruction in family medicine theory and principles of managing common problems, (2) 1- to 4-month rotations in different clinical departments, and (3) 40 weeks of rotations in community health centers. Family medicine is taught through daily patient care, classroom and group teaching, and self-study. During rotations in the hospital, the program provides at least a half day per week didactic session in the format of lectures, seminars, and case discussions. Longitudinal community outpatient training is provided in a community health center to ensure students experience continuity of patient care.²¹⁻²³ Residents work in community health centers under the supervision of a faculty member and log their activities in a book provided by the central government.

The Family Medicine Residency at Sir Run Run Shaw Hospital

Sir Run Run Shaw Hospital (SRRSH), along with 32 other large comprehensive (3A) hospitals and 730 medium and small hospitals, provides medical services to 54 million people in the Zhejiang Province of eastern China. SRRSH is the first hospital to establish a department of family medicine and has been providing 3-year, structured family medicine training to three new residents a year since 2005. Seventeen residents have participated in the program to date.

In 2010, SRRSH developed a formal agreement with the Genesys Regional Medical Center (GRMC) affiliated with Michigan State University (MSU). The relationship between SRRSH and GRMC began as a result of an invitation from a delegation of American-Chinese physicians to major hospitals in China. The vice-chair of the delegation is a physician at GRMC, and SRRSH was the first hospital to respond to the invitation for collaboration. The

formal agreement between the two institutions includes a plan for faculty development for the Chinese family medicine faculty, intensive training of current Chinese family medicine residents employed by SRRSH, a new standardized curriculum and rotation schedule for new family medicine residents at SRRSH, and a family medicine training program for Chinese community health center physicians.

During the newly developed 3-year residency training, residents receive instruction through a one-on-one preceptorship, emphasizing continuity of care and preventive medicine. Students are required to meet the six ACGME core competencies, which include patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. To meet these competencies and to provide both inpatient and outpatient clinical experience, full-time family medicine faculty from SRRSH supervise residents in three clinics. The clinics include a clinic located in SRRSH, a community clinic in Hangzhou, and a community hospital in the Hangzhou area.

The curriculum of the family medicine residency program at SRRSH is similar to that of GRMC. GRMC sent faculty for 2-month rotations to implement the new residency program. GRMC has supported SRRSH in the development of additional training sites and establishment of appropriate referral agreements between the Department of Outpatient and Department of Medical Affairs within SRRSH. GRMC and MSU have exchanged faculty, residents, and medical students with SRRSH. Select medical students from Zhejiang University Medical School participated in an 8-week family medicine clerkship sponsored by GRMC and MSU in the United States.

While other Chinese programs have collaborated with various international universities to develop family medicine residency programs,^{10,24} the SRRSH family medicine program

is the first training program in China to collaborate with an ACGME-accredited family medicine residency training program and has set a goal to become the first program in China to be accredited by ACGME international while simultaneously meeting all requirements of the Ministry of Health in China. The program has received recognition from the Ministry of Health as a model family medicine residency program for China.²⁵

The Future of Family Medicine Training in China

With the increasing number and types of family medicine training programs in China, the government has enacted a number of policies and regulations for family medicine training, hoping to establish quality standards across the training programs. However, many issues persist. First, due to diversity in the types of training, currently the title “family physician” applies to individuals with varying types and lengths of clinical training. In light of this, it is suggested that medical graduates planning to become family physicians should be required to complete a 3-year standardized residency, as standardized training is essential to ensure the credentials and quality of family physicians in China. Standardization of residency training in other specialties should also be encouraged to ensure the quality of and to equalize the length of training for all specialties. Second, family medicine residents have difficulty finding employment following the 3-year residency, as they receive no credential or higher degree as a result of this additional training.¹⁰ This dissuades many graduates from entering a standardized residency. Third, as a result of the first two issues, the skills and training of family physicians who have completed formal residency programs are not recognized by patients or other physicians. The Chinese government should develop policies to promote a cultural shift in how residency-trained family physicians are viewed. Further, the government should encourage

people to seek care from family physicians at community health centers, so family physicians can provide first-contact primary care, which is associated with improved population health. Hospitals and health officials at all levels need to recognize family medicine as a legitimate medical specialty. Qualified family physicians must be granted hospital admission privileges and authority to make subspecialty referrals for their patients.

Standardized training in family medicine and primary care in China is new, but the proposed health care reforms offer hope and encouragement for the support and growth of family medicine in China. The SRRSH family medicine residency program can serve as a model family medicine residency program and a template for other medical specialty residency programs in China.

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