Family medicine education and training in China:
past, present and future

INTRODUCTION

China is the world's most populous country with total population of more than 1.3 billion by the end of 2006 in Mainland China (Table 1). Over recent years its economic development has been remarkable. In tandem with this and as a result of both this increasing prosperity and the one-child policy, its population is getting generally older, has more chronic disorders, and has higher expectations for better health care. Increasing demand for health care and economic liberalism has, in the most prosperous eastern provinces, led to an explosion in acute care. For example Hangzhou City (Eastern of China) with a population of about 7 million has around 60 hospitals with 25 000 beds. In the longer term, focusing healthcare resources on acute hospitals is an expensive option and is likely to exclude the less advantaged from formal health care.

Family medicine is organisationally suited to the management of chronic disorders; it is also cheaper. For example, in Hangzhou City a family medicine consultation for diabetes costs 40 renminbi (RMB) compared with a typical hospital appointment that costs 120 RMB (average salary is 4000 RMB/month, 1 RMB = 1/15 pound sterling). In this article the development of family medicine in China, it current status, and future prospects are reviewed.

Table 1. Basic heath statistics in Mainland China by end of 2006.[5]

Categories	*n*
Total population	1 314 480 000
Total personnel involved in health system	5 619 515
Health professionals	4 624 140
Doctors and assistant doctors	1 994 854
Total health institutions	308 969
Community Health Service centre and station	23 036
Health professional working in family medicine	51 065
Doctors and assistant doctors qualified in family medicine	35 000[a]
GPs trained by the residency training programme	600[a]

[a]*Approximate number.*

METHOD

We have consulted documentary records, made personal contact with key informants in China, and co-authors, Yaping Du, Alex Sohal, and Martin Underwood have made reciprocal visits to observe how family medicine is practised, and to investigate training for family medicine in London and the Zhejiang Province in eastern China.

RESULTS

The past

Family medicine was first recognised in China more then 10 years ago.[1] From small beginnings its role has gradually become established. Table 2 lists the key steps in the history of family medicine in China from the late 1980s to now.

At the end of 1999, the Chinese Ministry of Health set ambitious targets for the development of family medicine education over the next 10 years. This included, by 2002, to retrain 1000 GPs trainers from other specialties; by 2005 to have established a better national GP training network in all big and medium-sized cities; and by 2010 to have completed the training of GPs in service and to commence family medicine residency training in every province.[2,3]

In 2000, the 4-year family medicine residency training programme was piloted in Shanghai and Zhejiang, with a total of 74 participants. In 2001, a 620-hour training programme for GPs in service was conducted in several cities and municipalities. By August 2002, the GPs training-in-service programme certainly appeared to have been delivered in 17 provinces and municipalities with more then 20 000 trainees in total.[2]

In 2003, encouragingly, a pilot survey in seven provinces and four municipalities showed that 32% of doctors in community health service centres and 43% of doctors working at community health service stations had participated in the GP training-in-service programme.[2]

From 2001 to 2003, 3816 GPs sat the Qualification Test for GP-in-charge.[2] Nationally, more then half of these 3816 GPs successfully completed this exam and acquired the title of GP-in-charge. Additionally, nearly 300 qualified as family medicine associate professors and over 20 as family medicine professors. The formation of a 'Technical title series' for GPs, equivalent to a structured career path, was an important stepping stone in trying to establish family medicine in China.

The present

The trainers. Working towards the 2010 goal, in 2005 more than 1000 doctors from other specialties who were interested in family medicine were trained at the Center of Family Medicine Training of Ministry of Health. They became the core trainers at the provincial training centres. Consequently, in 20 provinces and municipalities, courses to train the trainers were conducted. In Zhejiang Province, about 500 trainers were trained. Theoretically, their role was to provide family medicine training and education at all levels and to play a role in family medicine research.

The training bases and materials. In nine provinces and municipalities, including Beijing, Zhejiang, Henan, and Chongqing,

149 clinic training bases were established; while in a further 13 provinces and municipalities 143 community training bases were established. The Teaching Material Office of the Ministry of Health, edited teaching materials for colleges, technical schools, and for GP training, for example, the Training Center of the Ministry of Health translated a set of American family medicine textbooks and the Center of Family Medicine Training of Zhejiang Province published a set of training textbooks. At least eight different sets of relevant textbooks have been published in China.

The difficulties. Despite these many brave strides towards establishing family medicine, the grass-roots reality is probably still a far cry from the Ministry of Health targets. For example, there is concern that in all the areas where training has occurred, it has been a theoretical exercise with no experience of community patients provided to doctors, and no teaching of the practical skills required to manage these patients.

Additionally, the GP training-in-service programme has actually only been established in the provincial capital cities of economically developed areas and certainly not in other areas, for example, all the big and medium-sized cities in China. This appears to be backed up by a more recent national community health service survey, which showed that still at least 60 to 70% of doctors in the community have received no GP in service training.

The GP residency training projects, initially started in 2000 (see Table 2), have proved impossible to spread beyond the first three provinces. Furthermore, the reality for the few who have completed their residency training is that they are unable to find appropriate community-based jobs. Instead, these trained family

Table 2. History of family medicine in China.

Time	Major events
Late 1980s	The concept of family medicine (FM) was officially introduced into China.[1]
Early 1990s	Several pilot projects in family medicine were conducted in Beijing, Shanghai, and Zhejiang. These had no standard management and no accessible evaluation results.
1997	The Central Committee of the Communist Party of China and the State Council launched a key strategy to speed up FM education and the training of GPs.
1998	The Ministry of Health (MoH) and nine other ministries commented on the development of Urban Community Health Services (CHS); they wanted to establish a FM education system.
1999	Further directives were issued by the MoH on the development of FM education. The national FM training centre was established by the Capital University of Medical Science in Beijing.[2] National curricula for the GP residency training programme and the GP training in service programme were designed at the National FM Education Working Conference. Training standards and requirements were listed. FM formally became an academic discipline.[4]
2000	Four-year GP residency training projects were started in Shanghai and Zhejiang. In total there were 74 trainees. Additionally a 3-year GP residency training project was started in Beijing with 300 trainees.[3]
2001	The GP training-in-service programme started. This had been listed as a key intervention by the MoH.
2002	The MoH and 10 other ministries issued more directives/guidance on the more rapid provision of urban CHS.
Aug. 2002	The national FM training centre created a FM training network, based on the provincial FM training centres in 30 provinces (not Hainan or Tibet). The GP training-in-service programme was delivered in 17 provinces and municipalities with >20 000 trainees. The China Medical Association and The Chinese Medical Doctor Association both founded FM divisions/branches.
2003	A sample survey in seven provinces and four municipalities showed that 32% of doctors in CHS centres and 43% of doctors in the CHS stations had participated in the GP training-in-service programme.
2004	The GP training-in-service programme had been conducted in 28 provinces and municipalities. Sixty-four out of the 74 four-year FM residents from the training projects in Shanghai and Zhejiang were awarded completion training certificates.
2005	The national FM training guideline for residency programmes was changed from a 4-year course to a 3-year one.
2006	National revised curricula were published for FM residency training, which changed the 4-year training period into 3-year course. A nationwide FM training base was organised and evaluated by MoH.
2007	Four national FM training curricula were newly published, which included a 500-training hour curricula for GP in service programme, a 10-month curricula for key GPs in service programme, a 240-training hour curricula for the nurses in community, and a 40-training hour curricula for health managers. Twenty-two hospitals were recognised by the MoH as the national GP training bases with totally training ability of 538 trainees per year.

medicine practitioners have ended up working at first aid centres or other medical departments of hospitals. This is not a GP residency training at the core of family medicine education in China.

Other difficulties for the few GPs who have successfully obtained the national GP residency training certificates is that they are then required to attend continued education in family medicine yearly, for example, in Beijing. A minimum of 40 credit points for the compulsory courses of continued medical science are required every 2 years. With respect to undergraduate medical education, again there appears to be a gap between the dictum and the reality on the ground. Twenty out of the 99 medical colleges in China have an optional course of family medicine available.

Although this indicates a lack of family medicine teaching departments in most medical colleges, it would still potentially be very encouraging if one takes into account the short time span in which this change has occurred. However, the reality is that family medicine education is often delivered by public health lecturers who have never been formally trained in family medicine. Hence most medical students have little constructive education in family medicine at medical school.

The future

Family medicine education in China will attract great attention from the government. A large amount of money will be invested in this field. Family medicine will climb to its peak in the coming 10 years.[2] But, in our estimation, it seems very unlikely that by 2010, 200 000 GPs will have been effectively trained to serve as skilled primary care providers.

FUTURE RECOMMENDATIONS

Increasing funds for GP residency training programmes

The GP residency training programmes should be considered as the first priority for the development of an academic base for family medicine in China. Additional funds should be allocated to GP residency training programmes. Domestic and overseas financial support should be focused on GP residency training programmes. Special foundations for GP residency training programmes should be established, and the process and result evaluation assessment should be carried out during the project execution so that the limited funding is used to serve the most urgent purposes.

Revision of policies for employment, promotion, and treatment

Training programmes for GPs should be linked with GPs' employment. Positions could be identified where a GP's special knowledge would be of great value. Consequently, medical staff specifically trained in GP programmes could be given priority in employment, promotion, and treatment when competing for these positions. Such policies are important guarantees for the sustained development of family medicine specialty.

Masters and Doctorate Degrees should be available to GPs

The Chinese National Degree Council should set up an application system of family medicine specialty for Masters and Doctorate Degrees as soon as possible so that the academic specialty of family medicine can undergo sustained development.

Tian-hui Chen, Yaping Du, Alex Sohal, and Martin Underwood

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