Family Medicine and Community Health
ORIGINAL RESEARCH

A perspective on the development of family medicine in China

Guoping Xu

Abstract

Family medicine is a medical specialty devoted to comprehensive primary care for people of all ages. It has been recognized and developed as the foundation of modern healthcare system in all other advanced countries (except USA), and has enjoyed great success in the improvement of national health status and constraint of healthcare expenditure. The new healthcare reform plan and the development of family medicine system in China with focus on the wellbeing of all people have been hailed as a historic milestone. Establishment of a new specialty from scratch into a massive work force, however, has proven to be a tremendous challenge. With strong momentum from central government and the support of favorable finance and policy, a great achievement could be made when the healthcare model has truly changed from specialty care into primary care in medical education institutions and the healthcare industry, and the creation of hundreds of family medicine residency training programs has been accomplished. This article elucidated some perspectives and strategies on the development of family medicine in China.

Keywords: Family medicine, General practice, Primary healthcare, Residency training, compensation

CORRESPONDING AUTHOR:
Guoping Xu,
Johns Hopkins Medicine, Johns Hopkins Community Physicians, Middletown 21769, USA
E-mail: gpx628@163.com

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Introduction

As the core of the national health care and medical health services, general practice's dominate status has been recognized and implemented by all developed countries (except USA) for half a century, and it has met with extensive success. The medical and health system of China has entered into the advanced ranks, by planning the 2009 health care reform [1] and establishing the general practitioner system [2]. Depending on the top-level design, China has formulated the policy direction and grand blueprint for the steady development of this medical healthcare service. We have made progress in the basic health system and general practitioner system in a relatively short time. However, we are facing a number of difficulties in idea, policy, human resources, and educational training techniques; and more complex subsequent reform and innovation are ahead of us. If it developed smoothly, the medical and health system will make a significant contribution to the establishment of a prosperous, democratic, civilized, and harmonious modern socialist society. In addition, it will also help us to fulfill the Chinese dream to see the rejuvenation of China.

Historic evolvement of China's healthcare

During the 30 years since 1949, China achieved rapid development of its economy,

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and the per capita GDP was increased from 26 dollars in 1949 to 269 dollars in 1979 (an increase of over 10%). The absolute number showed that the economic level of that time was very low, but because of the right medical health services system (strengthened public health and primary healthcare, key services laid at the grass-roots, and medical costs mostly borne by the government [>85%]); the per capita life expectancy was increased from 35 years (1949) to 68.1 years (1979), exceeded Korea's, pursuing developed countries' results (Figs. 1, 2. At that time, the maternal mortality and infant mortality declined substantially. WHO once popularized the "Chinese model" to the developing country vigorously [3].

During the 30 years since the reform and opening up of China in 1978, the per capita GDP of the country has increased from 269 dollars (1979) to 3724 dollars (2009) (13.8%), reaching 6100 dollars in 2012 (22.7%), catching the moderately-developed countries' level. However, market-oriented reform was not appropriate for the healthcare field, it dismantled the healthcare system that traditionally only focused on preventive medicine and primary medical service. Specialized medical service became the mainstream, medical costs rose sharply, and new problems appeared; for instance, it was difficult and expensive to see a doctor. Per capita life expectancy of China only increased by 6.8 years during the three decades, and the gap between developed countries and China broadened. In contrast, the per capita life expectancy of Korea increased by 14.8 years within the same period, and reached the developed countries' level (Figs. 1, 2) [3].

The reasons that led to the end of healthcare services in China were various. The leading cause was the market-oriented policy's failure of the nation primary healthcare system which made most residents lose their medical security. In addition, environmental pollution, over-nourishment and problems associated with an aging population affected resident's health. As a consequence, the principle of preventive medicine was discarded damaging the primary healthcare service system and weakening teams of basic medicine causing the end of the healthcare service. This caused problems with the 5C service system: first-contact care, comprehensive care, continuity care, coordinated care and compassionate care.

For historical reasons, China has not set up clinical outpatient skill and labor service Evaluation and Management

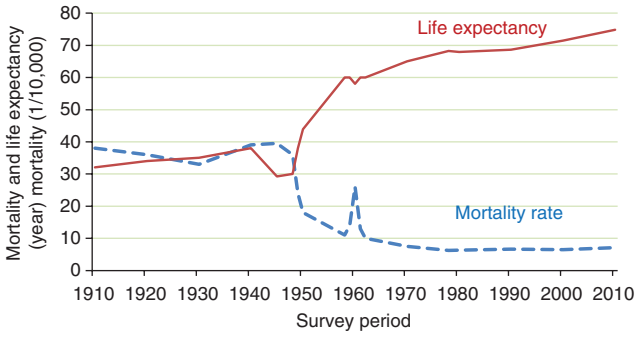

Fig. 1. China mortality rate and life expectancy trends 1910–2010.
Data from China's National Statistics and other sources [3].

coding. The main way that doctors obtain remuneration is by doing medical checks and making prescription but some checks and prescriptions are not medically necessary in many cases [4].

In the 60 years of exploration since the establishment of New China, the Chinese government and the domestic medical community have taken into account world-advanced experience, proposed the plan for the new medical and healthcare reform, and established the strategic decision to provide universal health care; the aim is to get back on the right track meaning that primary healthcare service is the first priority. The new medical innovation stresses the importance of prevention, to bring forward the time window of disease prevention and control. This is preventive medicine which will

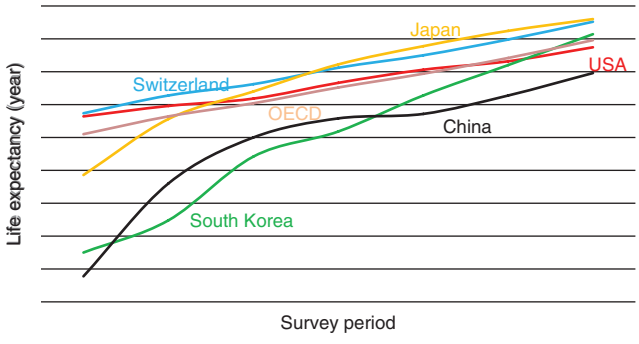

Fig. 2. Life expectancies in China and major developed countries 1950–2010.
Data from OECD and China's National Statistics [3].

also strengthen the development of general practice/family medicine, make primary healthcare accessible in urban community clinics and rural health centers, and send public health services and primary healthcare to residents' doorsteps. At the same time, the reform would help to set up the national basic drug list system, and reduce inflated medical costs. The ultimate goal is to make every Chinese resident enjoy high-quality healthcare service, thus improving the national's health level [1].

Strategies for development of family medicine in China

At the system design level, China's new medical and healthcare reform has made general practice/family medicine a high priority under vigorous development. The country has put primary medical service and general practice/family medicine at the core of national health insurance, as the essential aspect of medical service. However, the development of Chinese general practice/family medicine itself has just started, facing a number of great difficulties. All existing medical colleges are training bases of specialist physicians, and these lack standardization. Most bases have a lack of experience and faculty in the discipline of construction and training of general practice/family medicine, especially teaching clinicians, specialists, and leading key professionals in the field. China needs to build several hundred family physician's training bases on a large-scale immediately. Currently, family physician's social status is low, without respect. Health administrative departments and university medical education do not have proper awareness of the conceptual essence and development path of general practice, and corresponding policies have poor operability. At this time, family physicians' (from job-transfer training) salary is low, and the family physicians currently undertraining are not optimistic about their future salaries and career prospects. Therefore, there are few students willing to become a family doctor. The government has not proposed a specific policy goal in the salary issue of family physicians.

Since the establishment of the policy to implement the new medical and healthcare reform and to develop general practice, China has contributed much human and material resources, and has made periodic progress. According to related plans of the State Council, 150,000 qualified general practitioners should accomplish their training to serve in communities in 2015, and 300,000 in 2020. The actual progresses now indicates that if we want to achieve the grand goals, we must complete a great deal of work on a firm footing.

For a successful experience in providing universal health care via the general practitioner system in the same way as in other countries, there are some points that need to be urgently resolved and attended.

1. Realize the transformation of the macroscopic pattern of medical education, and shift from the previous mode of specialized medical service to the basic medical and healthcare service mode. Recognize the arduousness and chronicity of family physicians' training in our country. Family physicians will be the main part of the plan in providing basic healthcare service to most Chinese citizens for next 100 years; the proportion of family physicians needs to be above 50%–60% out of all medical practitioners. To achieve the goal of 300,000 family physicians being trained before 2020, the training of high-quality family physicians should be one of the core tasks in all medical colleges. With scientific design and unified planning, medical colleges around China must establish all-round general practice faculties as training bases to lay the foundation for training high-quality family physicians.
2. Clarify and increase family physicians' salary level to promote family medicine's healthy development. We are always appealing for salaries of the trained family physicians, who work for the basic healthcare service, to increase to the level of salaries paid to specialists who work in secondary and tertiary hospitals. Research show that Chinese medical and healthcare spending per capita in 2011 was 273 dollars, only 8% of that in OECD countries (3375 dollars), and 12.4% of that in Korea (2198 dollars). There is a substantial gap in the Chinese government's input in medical and health service area and increasing investments are needed. These investments should focus on basic health care services, with the majority of funds to pay the salary of attending family physicians working for primary healthcare institutions. The medical and health reform in Shanghai has achieved successful experience, and general practitioners'

working enthusiasm and the quality of medical care and services improved significantly after the salary increase. Meanwhile, their close cooperation with the Chinese Center for Disease Control and Prevention (CDC) to manage chronic diseases has delivered relatively good results. On August 17, 2013, during the China Health Forum, Shanghai Health and Family Planning Commission stated they would increase general practitioner's salary, and make it reach the level of tertiary hospital specialists [5]. By analyzing available materials, we know the government input is already quite strong in health centers based in villages and towns, and in urban Community Health Service Centers, and the feasibility is very high that invested capital will be used reasonably and effectively, and focused on increasing attending general practitioner's salary.

3. According to the Guiding Principles on the Establishment of the System for General Practitioners issued by the Chinese State Council, "based on relevant regulations, local governments are encouraged to set up specific posts and recruit quality professionals and technicians to work in primary health care institutions" [2]. Local authorities should actively make use of the present policies granted by the central government to set up specific posts and increase the salary of attending general practitioners working in health centers based in villages and towns as well as urban community outpatient services who have completed regular training to the same level as doctors working for specialized departments in Grade 2 or 3 local hospitals. The good news is that the plan had been recently under way as some related ministries and commissions under the State Council had started pilot programs in 2013 to set up special posts for general practitioners in the four central and western provinces of Anhui, Hunan, Sichuan, and Yunnan. These programs are funded by both the central and local authorities. Attached to the per capita annual subsidy of 30,000 yuan allocated by the central government for specific use only, local authorities should raise counterpart funds and make sure supporting policies are in place to ensure recruited general practitioners' working and living allowances, training and social security funds etc. [6].
4. Actively foster and improve the teaching strength in resident training for general practitioners (or family physicians), and step up on the establishment of the standardized syllabus and bases for the training of Chinese general practitioners. Presently, the founding idea of these bases are mainly for the purpose of training reassigned general practitioners, and are extremely lacking in teaching qualification, training syllabus and backup environment for clinical training, when compared with the requirements of the next-phase 3-year standardized training system for regular general practitioners or family physicians (for graduates from medical colleges, assuming the 5+3 training mode). The results and quality of the present training are yet to be tested to determine whether they have reached the level of necessary clinical skills capability and independent practice. Graduates from several rather formal training institutions for general practitioners (or family physicians) should be well considered to become candidate trainees, and active overseas recruitment should be brought in to balance the teaching deficiency.
5. There exist major defects in the resident training syllabus for general practitioners currently adopted in China. The core of the syllabus is to ensure that the training of general practice skills in community outpatient and inpatient services be implemented throughout the entire training of the 3 years. The present phase 1 rotation between specialized departments (lasting for 27/33 months) as per the training syllabus requires neither the involvement of general practice departments, nor general practice residents' outpatient service on a weekly basis. Short-term training of general practice outpatient and community services has been arranged within the 6 months of the end, missing the organic integration of the rotation between specialized departments, as well as clinical outpatient and inpatient general practice, as a whole system. As a consequence, the effects of such training are limited, and the trainees will find it hard to work as qualified general practitioners.
6. Proactively set up people-centered health homes (PCHHs), a.k.a. standardized primary health care units, including urban community health service centers (or

clinics) and health centers based in villages and towns. PCHHs are the direct suppliers and major core components of primary health care services. The full construction and function of these PCHHs, as well as the quality of the medical and health services they provide, directly concerns the success of China's reformed medical and healthcare system. At present, national funds for primary health care institutions are relatively adequate. However, high-quality medical and health care services still cannot be provided to meet residents' demand because of the lack of key elements such as a good operating mechanism, and well-qualified general practitioners (or family physicians) to host the outpatient service [7, 8].

7. The prospect of the pathways to develop general practice in China.

The first step is to set up specific posts, and increase the salary of general practitioners [6]. General practitioners working in primary health care institutions who have completed the standardized training program, may be allowed to apply for the promotion of professional title a year earlier, and recruited as attending physicians of general practice before those with the same qualifications [2]. Performance assessment exposes glove money and bribes in broad daylight, bringing in more equality and publicity. The numbers of residents signing up for healthcare service, and patients being treated, service quality, public satisfaction and the like are all listed as key elements contributing to the promotion of a general practitioner's professional title [2]. Attending physicians assuming full-time clinical work should be exempted from the pressure of publishing papers to get the promotion of the professional title. As for academic degrees' optimization, it may be suggested that graduates of medical colleges (1~4+4) be awarded the master's degree in medicine, and those that have passed the training for resident doctors (1~4+4+3) be awarded the doctoral degree in medicine.

Updating of common misunderstandings and concepts in China's healthcare field

To promote the sound development of Chinese primary medical and healthcare services, now is the time to rectify the conceptual misunderstandings that have long existed in related fields. The formal concept of primary care (PC) should be primary medical and healthcare services, which are implemented by general practitioners (family physicians) or other primary care providers (PCPs). Such services should be comprehensive medical and health care for the residents with the 5C characteristics, so they are definitely not "entry level" services. The corresponding conceptual counterparts are inpatient services or medical services provided by specialized hospital departments, including secondary care (inpatient services or medical services provided by specialized hospital departments via PCP referral) and tertiary care (inpatient services or specialized medical services provided by academic and medical centers via PCP or secondary hospital referral) [9, 10], but not high-level medical and health care services that do not even exist themselves. There is a great deviation or misinterpretations regarding the concept of "primary medical and healthcare services" commonly seen in Chinese medical literature and government documents, resulting in widespread misunderstanding among the public. Under China's past circumstance of "poverty and blankness", primary medical and healthcare services used to be mainly provided by non-commissioned peasant medics without formal training; it was understandable to refer to this as entry level services because the service level was in fact rather low. However, the present social and economic living standards, medical and healthcare service level, as well as the formal training for doctors have been greatly improved, and residents' demand for medical and healthcare services keeps increasing. All these require rectification from the incorrect concept of the past, and restoration of the original and true meaning of primary medical and healthcare service. And of course, concepts such as grassroots medical services or doctors should be abandoned.

Misunderstanding of doctors' grading

According to the medical and healthcare service system of developed countries in the world such as US and the like, there are only two ranking levels for doctors, namely resident doctor and attending doctor. Resident doctors can only prescribe under supervision and guidance of attending doctor supervisors, and they will reach the level of independent practice after graduation from the resident training, thus becoming and remaining attending doctors until retirement. The starting salary of attending doctors after training graduation is the high

wage of the field standard, plus small ranking raises to go with the increase of their practicing years. The directors or deputy directors of hospital clinics are basically part-time jobs; their salary is that of attending doctors with a small amount of administrative duty allowance as a token. In China, there are different levels of resident doctor, chief resident doctor, attending doctor, associate chief doctor and chief doctor, and these titles are directly related to different salaries. The formation of such a grading system has its historical reason, but after the founding of a standardized resident doctor training system, the unnecessary pressure of professional title promotion caused by this kind of grading system is outdated, with a very negative effect on attending doctors' normal clinical and medical practices, as well as the establishment of a good doctor-patient relationship. It would be recommended to gradually exit the present mechanism. and set up an access mechanism of attending doctors and responsibility-based service system, to improve the overall quality of medical service, and to accord with the norm of the international practice.

Misunderstanding of clinical degree grading

In the US, medical education is part of the professional postgraduate education. It takes four consecutive years (for both master's and doctor's degrees); graduates will be awarded a doctoral degree to practice under supervision, and are fully capable of independent practice after graduation from the resident training and acquiring the degree of medical doctor (MD). Medical education in other developed countries is similar to the above-mentioned American version, or some may be combined programs of consecutive graduate and postgraduate ones, with a master's or doctor's degree of medicine awarded in the end. Most doctors are engaged in full-time clinical and medical services, with a small minority engaged in research and teaching services at the same time. Only a minimum of devoted doctors who are extremely interested in scientific research will complete a PhD degree, which is a personal decision and totally irrelevant to salary or the promotion of one's professional title. The 5-year education in Chinese medical colleges should include courses of both bachelor's and master's degrees, and such graduates with the master's degree will be awarded the doctoral degree in medicine after their graduation of resident training. When the demand for doctors eases in the future, it will be considered to extend the 5-year collegiate education to 6 or 8 years, matching the standards of developed countries. Under the current medical system in China, and because of the pressure of professional title promotion, lots of doctors or graduates engaged or majored in clinical and medical services are applying for academic master's and PhD degrees. This is a waste in the training of clinicians and medical talents, especially in the field of general practice, and it should be studied and corrected as soon as possible. Allowing for the important roles of preventive medicine and public health in the national medical and healthcare service system, it is highly recommended that graduated resident doctors apply for the Master's degree of Public Health (MPH) as this will significantly increase the quality of the community medical and healthcare services they provide.

Misunderstanding of general practice (family medicine) and specialized medicine

General practice (family medicine) is a comprehensive clinical discipline founded on the basic knowledge and clinical skills of all specialized disciplines of clinical medicine. It is the major discipline in the field of Primary Care, and its corresponding counterpart is specialized medicine focusing on a specific field with its relevant and specialized training [10]. General practitioners (family physicians) on the whole have more medical and healthcare knowledge and clinical skills than doctors of specialized hospital departments. Therefore, general practitioners and doctors working for specialized hospital departments should enjoy the same social status and prestige, as well as similar salaries.

Conflict of interest

The author declares no conflict of interest.

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