Analysis

Ten years' GP training in China:

progress and challenges

In 2009, China launched a programme of major primary healthcare reform, with the aim of achieving universal health coverage across urban and rural areas by 2020.[1] This required a strong GP workforce. Facing a critical shortage of qualified GPs [32 400 nationwide], the Chinese government set a national target of providing 2–3 GPs per 10 000 population, a total of 300 000 GPs by 2020. Efforts to achieve this goal have progressed, as illustrated by data suggesting there were 309 800 in total (2.2 GPs per 10 000 population) in 2018 (Figure 1). We explore the progress and challenges in GP training in China over the past 10 years and its prospects for the future.

PROGRESS AND ACHIEVEMENT

The education of GPs has attracted significant attention from the Chinese government since 2009, with the introduction of a series of new policies and GP training programmes. Huge investment was made (20 billion RMB, £2.2 billion, $2.8 billion) during 2010–2015 to promote development of the GP workforce.[2] In 2011, the State Council initiated a unique GP training system with multiple pathways, tailored for China's huge population and uneven distribution of resources, and accounting for existing community medical personnel.

China now has five GP training programmes, each with specific aims, duration, curriculum, and targeted trainees. A new '5 + 3' model of residency training (5-year medical school plus 3-year GP residency) is expected to become a gold standard. The government has established 559 hospital and 1660 community training bases nationally.[3] Residency training becomes mandatory for new medical graduates from 2015, with an additional requirement that GP residents should exceed 20% of total residents, meaning that numbers of GP residents are expected to continue to rise. A new Masters' degree in GP training has also been established as an extension of residency training, aiming to provide academic leaders in general practice and GP trainers for the next generation of GPs; more than 800 graduates received the Masters' between 2012–2018.[3]

A post-transfer programme with 1 year's curriculum (10 months' hospital, 1 month's community, plus 1 month's theoretical learning) offers conversion of existing primary care providers in the community to become GPs. Since 2010, this has trained 150 000 physicians and has been the main approach to producing GPs over this short period.[3] The rural designated undergraduate education programme and assistant GP programme aim to produce qualified GPs for rural and poor areas. The former offers high school graduates free medical education on condition that they work for 3 years in rural practice; between 2010 and 2018, 73 universities have enrolled more than 50 000 undergraduates on this scheme. Assistant GP training (the '3 + 2' programme), starting in 2016, consists of 3-year undergraduate plus 2-year residency training and is another transitional strategy to address the shortage of GPs in undeveloped regions.

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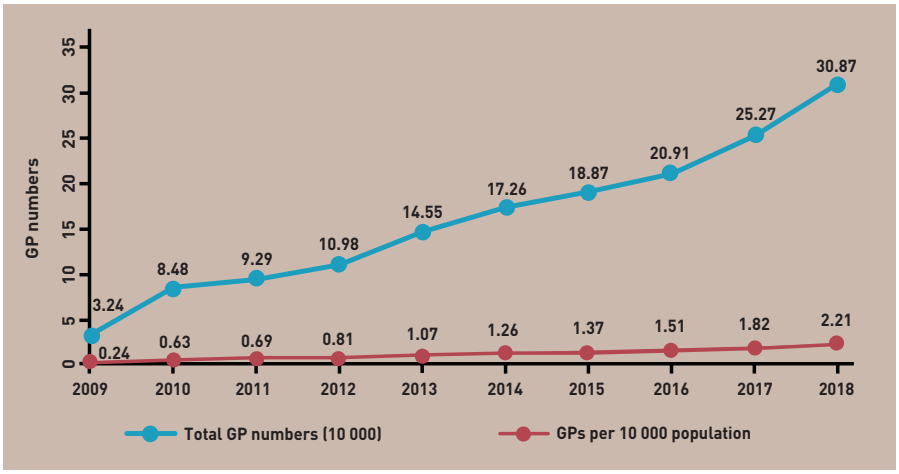
CHALLENGES IN GP TRAINING

Although the development of such a large number of new GPs in a short time frame is extremely impressive, many challenges remain in establishing a reliable and effective primary care workforce that can provide safe and clinically cost-effective primary care to a vast and varied population.

The first challenge concerns quality. China has adopted various pathways to training GPs, differing in prospective trainees, duration, curriculum, and training base. However, a uniform educational blueprint and core competencies for GP trainees were not established across these training programmes. In addition, although there are national requirements and standardisation of each programme, variation exists across China. Significant heterogeneity in training contributes to inconsistency in GP competency and jeopardises public trust.[4] Furthermore, rotations in community-based clinics are short compared with hospital training; excessive exposure to hospitalised patients will not enhance the capacity of GP trainees to provide community services in future.

The GP trainer role is key in guaranteeing quality of training. However, there is a significant lack of Chinese GP trainers and their teaching ability is open to question; they are certified after only 5 days of theoretical courses and some assignments in course design. In addition, most GP trainers are hospital specialists, unfamiliar with management of common medical conditions in the community.[5] Although some GP

Figure 1. Growth of GP numbers in China from 2009 to 2018. Source: China Health Statistics from 2010 to 2019.



trainers are practising GPs in the community, their current work, dealing mainly with minor diseases, may lead to negative role modelling.

Retention is another huge challenge. Audit reveals that only 21.4% of students in a designated programme were willing to work in a rural community after their 3-year employment contract,[6] and 57.8% of surveyed GP trainees across different programmes reported working as GPs after graduation.[7] Public data in 2018 also showed there were only 156 800 (50.8%) registered GPs, despite 308 740 physicians being qualified as GPs. Low retention rates reflect current conditions in China's hospital-driven system, where GPs in community health facilities have less pay, lower social status, and poorer career prospects compared with hospital doctors. This adversely influences the choice of talented medical students: in each year's residency programme recruitment, GP training positions remain unfilled while other specialties are oversubscribed, for example, only 50% of 10 000 GP positions were applied for nationally in 2014.

RECOMMENDATIONS FOR FUTURE DEVELOPMENT

Defining the precise role of GPs in the Chinese health system is extremely important:[8] like GP training in UK and Australia, it will guide the educational blueprint and help to outline the core competencies of general practice. The curriculum should be redesigned towards a more community-based schedule and reflect the real work of community health care. This requires a large cohort of qualified GP trainers in the community, and effective training programmes for GP trainers need to be developed based on local GPs' learning needs. Although the government relies on the Chinese Medical Doctor Association to lead national standardisation, it is worth considering establishing an independent agency, akin to a national specialty board of GPs in Western countries,[9] to provide academic development for GP training, accreditation, the regular assessment of training programmes, certification of GP trainers, and organisation of specialty board examinations, so as to produce homogeneously trained GPs across institutions and different training programmes.

The past decade has seen an impressive rise in GP numbers but a slow development of supporting conditions such as salary, social status, promotion, and healthcare system reform, leading to poor retention for GP graduates. Clearly, the attractiveness of the specialty needs to be further improved. Reducing the salary gap between GPs and hospital specialists should be top priority; as well as opportunities for academic research, teaching, and private business. Academic leadership should be enhanced by forming academic groups, supporting academic GPs, and making dedicated research funds available for primary care.[3,10] Ultimately, training more GPs cannot be considered as a solution in isolation within the health system, as its success as a strategy to improve healthcare quality, access, and sustainability will depend on fundamental and wide-reaching reforms. Recognising the substantial cost-saving impact of primary care on healthcare systems, these reforms should include consideration of a gatekeeper role for GPs and compulsory patient registration,[11] and transformation of the existing hospital-centred healthcare system to one based on primary care.[12]

With the new goal of training additional 400 000 GPs over a 10-year period announced by the Chinese State Council in 2018, sustained action should be taken to enhance the quality of training programmes and GP retention based on the past 10 years' experience.

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Funding
The research associated with this article was supported by the Imperial NIHR Biomedical Research Centre and the National Institute for Health Applied Research Collaboration North West London (NIHR ARC NWL). The views expressed in this article are those of the authors and not necessarily those of the NHS, the NIHR, or the Department of Health and Social Care. This research was also supported by Scientific research project of Sichuan provincial health and family planning commission (No. 18PJ526).

Ethical approval
Ethical approval was not required or sought in the writing of this article.

Provenance
Freely submitted; externally peer reviewed.

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Competing interests
Benedict Hayhoe and John Spicer are both general practitioners working in the NHS. The authors have declared no competing interests.

DOI: https://doi.org/10.3399/bjgp20X712961

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