Reflections on General Practice Training in China: Innovative and Implementable ideas from the Guangdong General Practice Symposium

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Abstract

Introduction: The concept of general practice in China was first introduced in 1980s in line with several years of healthcare reform. In the last 30 years of general practice development in Australia, the gatekeeping role of general practice has been slowly developed and formulated into health policy and has made steady progress with some remarkable success in certain parts of China. In Australia, general practice education and training were initiated at the time of the founding of the Royal Australian College of General Practitioners in 1964 and a relatively mature system of general practice education and training has been established. To establish a more relevant and effective training model of general practitioners in China by reference to Australian model will be an excellent starting point to introduce into the general practice education, training, clinical services and health policy strategic plans in China.

Methods: Feedbacks from general practice trainees at the Guangdong General Practice Forum collected via an online portal after the lectures and were subsequently analysed.

Results: The feedback survey contained the evaluation questions regarding the GP’s response to the academic contents, organization and administration of the forum. The GP trainers and trainees showed very high satisfaction (100%). Twenty-one (95.45%) of the GP trainees agree that the forum is very useful in clinical practice while one (4.55%) GP trainee disagreed slightly that the forum is ordinary. There were four implementable suggestions obtained from the feedback evaluation during the forum.

Conclusions: More regular, frequent and consistent GP training forums with experienced overseas GP trainers and medical educators will be needed to improve GP education and training to accelerate the general practice education and training development in China.

Keywords: Bio-Psycho-Social-Political-Economical-Spiritual; Clinical Reasoning; Self-reflection; General Practice
Introduction

The concept of general practice (GP) was first introduced in 1980s (Wang et al., 2013). GP is often considered the core of primary healthcare (PHC) (Li et al., 2018), which is the foundation of an effective health care system. In order to develop a more productive, coordinated, and cost-effective healthcare system, China has launched a primary care reform in 2009 (Wang et al., 2013). A unified and standard training mode for GPs, called "5 + 3" model, was established in 2011 and GPs should initially receive a 5-year undergraduate education, followed by a 3-year standard postgraduate training in GP according to the model (Ren et al., 2017). After several years of healthcare reform, gatekeeping policy has achieved some success in China despite the shortages of qualified general practitioners (GPs) in China with signs of the PHC system being resistant to reform efforts (The Lancet, 2019). To increase the numbers and improve the quality of PHC workforce, the specific targets has been set to provide two or three GPs per 10,000 residents by 2020 and five GPs per 10,000 residents by 2030 through proactive recruitment and training for health professionals located in rural and areas of unmet needs in 2018 (Yip et al., 2019). The GPs must be trained according to the "5 + 3" model, and the three-year standard training in GP is becoming the critically important parts of clinical training. Wherever the GPs are in either hospital training or in community health centres training, the training model and the teaching capabilities of the medical teachers (the trainers) would play a significant role in ensuring the quality of GP training. However, there is lack of consensus approach in terms of training model and difference in the teaching capabilities of the trainers in China to assure the consistency of training. To address these dis-consensus and difference, one of the suggested approaches is to invite general practitioners from a relatively mature primary healthcare system (Australia and the United Kingdom) for advice on the establishment of teaching and learning exchange programs. GP-train-the-trainers program will be a salient starting point for the advancement of GP education and training in China.

In Australia, GP education and training have been well developed into a comprehensive system since its initiation at the time of the founding of the Royal Australian College of General Practitioners (RACGPs) in 1964 (Hays et al., 1995). The initial goals include the establishment of GP education for undergraduates, regular continuing postgraduate education, researches in GP, guidelines and standards for preventive medicine, practice management skills. Most of these initial goals are reaching their youth or adulthood stage with ample opportunity for growth into its full potential. The ongoing Bettering the Evaluation and Care of Health (BEACH) study will provide the updated lists of common GP-managed problems to ensure the update of the ever-changing academic contents for GP curriculum with medical school students and GP training registrars (Britt and Miller, 2013). In terms of guidelines and standards for preventive medicine, the increasing multicultural nature of general practice will open up international research collaboration with international partners and aim to ensure the cultural relevancy and appropriateness when updating the preventive guidelines. The theme of the Guangdong General Practice Forum focused on training the GP trainers both in hospitals and community to implement the theoretical teaching and field simulation demonstration into clinical practice. The forum has adopted the diverse model of educational delivery with interactive lectures, workshops and bedside teaching ward rounds by experienced GP trainers from both China and Australia, hence establishing an international platform for GP education and training for both China and Australia.

The aim of this article is to evaluate and discuss the feedback from general practice trainers and trainees at the forum. Through these feedbacks collected online on completion of the forum, we'll identify the gaps needed for improving GP clinical reasoning skills in their education and training in China. The ultimate goal of this article will certainly be the provision of innovative and implementable ideas or thoughts for training clinically competent GPs, setting up training standards and encouraging collaborative GP research in China.
Method

The article used the evaluation and feedback from the lectures of Guangdong General Practice Forum to identify the comprehensive training needs and gaps for the GP teachers. The lecture series at the Forum include the policies, ideas and the methods on the GP education and training in Australia and China. The feedback form was pre-designed for feedback with emphasis on GP clinical reasoning and training guidelines and policies. The feedbacks provided by 22 trainers and trainees were collected via an online anonymous portal after the lectures. The results were subsequently presented into graph or figure and analysis was performed with subjective written description.

Discussion

Our forum has provided an excellent academic platform for promoting evidence-based GP education and training with international collaborative research between China and Australia. In the forum, the GP trainer experts elaborated the concepts, policies, objectives, effective methods on GP education and training by providing simulated clinical cases with clinical skill demonstrations for GP teaching ward-round, GP clinical reasoning and GP clinical research. The GP trainers and trainees showed very high satisfaction (100%) in response to the survey. The lectures have provided the latest clinical development and research updates in terms of GP education and training, and the schedule of the lectures has been designed to facilitate the GP trainers and trainees' proactive participation. The forum lasted for two and a half days from Friday afternoon to Sunday afternoon and made it flexible for GP training experts and trainees to prioritize clinical workload with learning to teach during the ward-round. The forum schedule made the learning for the GP trainers and trainees very efficient in both applied knowledge and the fieldwork practical skill learning in a limited timeframe. 21(95.45%) GP trainers and trainees rated the forum being clinically useful, while only 1(4.55%) GP trainee rated the forum being ordinary. In summary, the forum has provided an overarching guide to the development of GP clinical reasoning teaching framework with the following key points:

1. The process of clinical reasoning is essential to making a timely and accurate diagnosis in a GP consultation.
2. Clinical reasoning in the GP clinic can best be taught as a skill within a skill-teaching framework.
3. Teaching clinical reasoning in general practice encourages personal reflection and refinement of the clinician’s own clinical reasoning skills to improve patient outcomes.

Clinical reasoning in general practice is both difficult to define and to teach in the consultation room for GP trainees and trainers. GP trainers generally ‘know it when they see it’, but rarely ponder what is meant by it, and more importantly, how to teach it to the next generation of general practitioners. The classical definition of clinical reasoning includes an ability to integrate and apply different types of knowledge, to weigh evidence, critically think about arguments and to reflect upon the process used to reach a diagnosis (Anderson, 2006). Clinical reasoning in the GP consultation room requires not only an accumulation of knowledge but also a level of experience, which is generally what sets apart GP trainers from GP trainees. GP trainers or experienced GPs usually consults with a degree of automation (Lesgold, 1989, Harasym, Tsai and Hemmati, 2008, Croskerry, 2009), which to the GP trainee is difficult to learn in a short GP consultation and can be a barrier to learning (Lesgold, 1989, Harasym, Tsai and Hemmati, 2008, Croskerry, 2009). Automation of clinical reasoning allows GP to undertake consultations in a timely and streamlined fashion at the risk of missing critical information leading to the incorrect diagnosis if care is not taken (Harasym, Tsai and Hemmati, 2008, Elstein, 2009). A classical case resulting in the same risk can arise for GPs seeing a long-term patient and failing to think about alternate diagnosis other than those previously made in the patient. Another case demonstrating the limitation of clinical reasoning is that a diagnosis that could have been made with a careful history and physical examination in one consultation may end up taking two or three consultations and
several unnecessary investigations to reach if differential diagnoses are not considered early. To avoid automation, self-reflection in clinical reasoning becomes an important element of an experienced GP’s consultation. Some of the benefits of reflecting upon and improving one’s own clinical reasoning, which has been shown and discussed in the forum lectures, includes improving time to diagnosis, avoiding assumptions, reducing unnecessary investigation and the costs these incur, improving patient satisfaction and being branded with the ‘good doctor’ label. Clinical reasoning is becoming an important part of general practice education and training and should be implemented in the daily practice and training of GP trainees in reference to the above-mentioned key-points.

In China, qualified GP trainers and trainees are both seriously inadequate in numbers at present, and GP trainers and trainees are often being trained at the same time. National and state training bodies are responsible for both GP trainers and GP trainees’ education and training in order to relieve the GP workforce shortage. However, the on-the-job training programs for just one day a week or fortnight may not be adequate for ensuring GP’s competency for unsupervised clinical practice. The Australian lectures have shown some useful train model for references by the Chinese GP training authority to develop its own education and training model. The continuous targeted training and assessment for GP trainees and trainers in China will require a collaborative effort with more experienced training and education system like the Australian GP education and training system and the senior training body in other states of China.

In Australia, the development of GP education and training is relatively mature. Firstly, RACGP will revise the GP training standards, which contains the standards on GP training, supervision and assessment (The Royal Australian College of General Practitioners, 2017). According to this standard, whether you are a supervisor or a GP registrar or an evaluator, you know that what you should do and how to do. Secondly, because More than 11,000 conditions are currently described and with approximately five new diseases is being described each week, learning about all diseases is not possible (Cooke et al., 2013). BEACH has been continuously gathering encounter information from 1000GPs annually for several ten years. The database of BEACH can help GPs or GP educators to find most common conditions in GP, which would be helpful to direct continuing medical education (Cooke et al., 2013).

BEACH has revealed valuable and crucial consultation snapshots and insights that have, in many ways, shaped GPs research, clinical, epidemiological and pharmacovigilance practice, training, infectious disease trends, policy, and pragmatic understanding of GP (Beilby, 2016). Preparing applications for many research grants, justifying policy changes, introducing curricula reforms, assembling GP workforce planning and training applications, debating primary care coding and satisfying, GPs have all benefited richly from accessing the BEACH data (Beilby, 2016). China can set up a similar data collection system like BEACH to continuously collect objective GP’s clinical service data. The breadth of GP consultations has been described internationally and the range and frequency of problems managed in primary care is similar between the United Kingdom, the US and Australia (Bindman et al., 2007). Before China have the GP consultations database, we can refer to the GP consultations described internationally for the range and frequency of problems managed in primary care. This would greatly improve the efficiency and clinical relevancy of the GP trainers and GP trainees’ education and training. Ultimately, it will improve the clinical competency of GPs and create a more effective PHC.

Conclusion

According to the feedback of our forum, we can conclude that more frequent and standardized GP education and training with invitation of overseas GP training experts for lectures and workshops is an innovative and implementable idea for GP education and training with an ultimate goal of accelerating primary care development. Another innovative approach is to develop China’s unique BEACH data collection to establish China’s own top 30 GP-managed problems to facilitate continuous professional development training for GPs. However, there is limitation of this study due to its descriptive nature of data analysis and the lower number of respondents. A clear-
cut conclusion should be confirmed by further researches and follow-up studies.

**Result**

**Satisfaction Survey**

The analysis of the satisfaction survey showed very high satisfaction rate in terms of content and format (table1).

**Table 1: Results of satisfaction survey of the forum.**

<table>
<thead>
<tr>
<th></th>
<th>Satisfied (%)</th>
<th>Ordinary (%)</th>
<th>Discontented (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>13 (59.09)</td>
<td>9 (41.91)</td>
<td>0 (0.00)</td>
</tr>
<tr>
<td>Format</td>
<td>19 (86.37)</td>
<td>3 (13.63)</td>
<td>0 (0.00)</td>
</tr>
</tbody>
</table>

**Forum Impact Investigation**

The impact of the forum included overall benefits and different thematic benefits with 21(95.45%) trainers and trainees rated the forum being clinically very usefully and 1(4.55%) trainer rated the forum being ordinary. The five themes include management, skills, theory, diagnosis and thinking with aims to broaden critical thinking and keep abreast of strategic plan and policy development, improve the capability on diagnosis, increase theoretical and applied knowledge, improve clinical skills in ensuring individualized management on patient care. The trainers and trainees choose no more than two themes and the results were shown in figure (Figure 1).

**Figure 1: Ratios of the different benefit themes**
The thematic analysis of the forum showed that GP trainers and trainees rated the most benefit in clinical thinking and reasoning, clinical skills in diagnosis and ensuring individualized management. GP trainers and trainees stated that the forum lectures demonstrate the clinical reasoning process in integrating and applying different types of knowledge, weighing evidence, critically thinking about arguments and reflecting upon the differential diagnosis. The lecturer from Australia showed in his lectures about the clinical reasoning model for diagnosis with early identification of the most common differential diagnosis and the most critical diagnosis (not to be missed) in a standard GP consultation. The GP trainers and trainees spoke highly of the diagnostic model for GP education and training as well as the individualized management on patient care from a bio-psycho-social-political-economical-spiritual point of view in the lecture delivered by the Australian GP trainer expert. General practice research in the Australia lectures has made the strongest impression with the GP trainers and trainees in creating through online research regarding Australian top 30 commonly managed GP problems for training and education, furthermore for health policy and strategic plan development.

Recommendations from the trainers and trainees

The feedback questionnaire is designed for GP trainers and trainees to make recommendations of what can be improved for the forum. The recommendations were as follows:

1; The lecture content was of top-quality and should have circulated to more GP trainers and trainees for attending the forum

2; The lecture materials can be shared among the GP trainers and trainees to increase the training impact of the forum

3; The time schedule of the lecture for the speaker is relatively short and more time should be allocated to optimize the content learning

4; The GP trainer experts should be provided with 10-15 minutes extra time to allow the more interactive lecture delivery

All the above positive recommendations will be taken into account when we are planning the next forum for the GP trainers and trainees.

Take Home Messages

1. More frequent and standardized GP education and training with invitation of overseas GP training experts for lectures and workshops is an innovative and implementable idea for GP education and training with an ultimate goal of accelerating primary care development.

2. Another innovative approach is to develop China's unique BEACH data collection to establish China's own top 30 GP-managed problems to facilitate continuous professional development training for GPs.

3. A collaborative approach between the Curtin University and Sun Yat-Sen University will be important and critical for GP training and education in China.

Notes On Contributors
Acknowledgements

Thanks for the staff and clinicians in the Third Affiliated Hospital, Sun Yat-Sen University providing the venue for the forum. The source and copyright owner of Figure 1 is Dr Xiaoyun Liu, who analyzed and summarized all the feedback data from the Forum. There is no copyright licence concern.

Bibliography/References


Appendices

None.

Declarations

The author has declared that there are no conflicts of interest.

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Ethics Statement

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