RESEARCH ON THE HUNGARIAN GENERAL PRACTITIONERS SYSTEM AND ENLIGHTENED EXPERIENCE TOWARDS CHINA

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Abstract- Introduction: The success of the GPs system in Hungary, over more than twenty years, makes it a great reference to the equivalent Chinese GPs system, particularly, regarding system implementation and development, problem prevention and management, and practical matters, such as payment methods that reduce medical burden to residents. Aim: the article used stakeholder theory to analyze effects of the Hungarian GPs system and factors that the Chinese GPs system needs to consider: Hungarian GPs system be a significant referent for China, regarding experience in implementation, problem solving, issues. Methods: Based on the stakeholder theory, the document and historical analysis research methods method, including research results, documents, policies, regulations and government statistical bulletins issued by two states. Results: First, the analysis based on theories and addresses the framework and direction of GPs system's development and implementation principles including 1) the focus on the benefit of residents, 2) the establishment of a "biological-psychological" medical model, and 3) the implementation of a first diagnosis and referral system. Then, it examines the capitation as payment mechanism and the incentives on salaries and training. Third, it analyzed effectiveness of Hungarian general practitioners system, while exploring the justifications of informal payment used in Hungary, from a socio-cultural, legal, moral and economic perspective. Thereafter, a description of the current Chinese GPs system is made, including the variations in specialized training of medical professionals, the underdeveloped referral mechanism, the lack of awareness about GPs among community residents, and the supply/demand imbalance. Finally, the review puts forward some suggestions to improve the Chinese GPs system: the improvement of the referral mechanism, the awareness of community residents, the balance between supply and demand, and the enhancement of participation among medical professionals through the establishment of reasonable incentive mechanisms, while avoiding the negative effects of informal payment for medical services.

Keywords- General Practitioner System; Hungary; Experience; China

I. INTRODUCTION

The role of the general practitioners as a "gatekeeper" plays an important role in determining whether the patient should be an outpatient or inpatient. Since 1992, the Hungarian government set up the GPs system, which became an essential medical service supplier at the community level. Hungary is a member of the Centre European countries, but it used to be part of the soviet bloc before 1989, whose political system was similar to the one implemented in China. Moreover, the medical services mechanism in both countries (China and Hungary) has common historical foundations.

However, a lack of long-term primary health care institutions in China is making a disorderly division of labor between large/medium-size hospitals and primary healthcare, consequently, a gradual increase of the medical expenses on residents has been evident, and the different economic development and medical levels across regions in China, limits the access to services particularly regarding complicated procedures. Therefore, the recently implemented Chinese GPs system is still at a starting point, and the references on the Hungarian GPs system will be presented in order to analyze the development of the GPs system in China. The research is organized as follows: an initial description of the literature review, followed by a detailed introduction to the Hungarian GPs system including its development history, implementation principles, service framework and the new direction on the patient payment as well as the safeguard mechanism for doctors' incentives and payments. Finally, the effectiveness and the widespread problem of informal payments in the GPs system in Hungary, which will be discussed from the perspective of social, culture, legal ethics, and economic efficiency.

The goal is to illustrate the Chinese GPs system based on the experiences of Hungary in the same field in order to facilitate the implementation in China particularly regarding the improvement of the referral mechanism, the awareness of community residents, the balance between supply and demand, and the enhancement of participation among medical professionals through the establishment of reasonable incentive mechanisms, while avoiding the negative effects of informal payment for medical services.

II. DEFINITION, THEORY AND LITERATURES REVIEW

Firstly, the general practitioner system is providing medical resources for the community through individual agreements between general practitioners and residents. The system offers health care management and medical system arrangements with accessibility, comprehensiveness, humanization and continuity to the community (Binghui, 2010) [1].

Secondly, the article used stakeholder theory, "individuals or groups that can affect the behavior of the organization". In terms of the Chinese GPs system (involving not only the government, but also social organizations, communities, doctors and residents), the stakeholder theory has also been widely applied in the medical services field, since every part have differentiated purposes. In the construction of the GPs system, the central point is to maintain the fundamental interests of the community residents by creating close ties among the family doctor, third parties and the government. In addition, it uses the health care, the performance appraisal, and the financial support policies to guarantee an effective interest coordination mechanism.

Thirdly, literatures review can be presented as followed:

As for the Hungarian general practitioner system, researches focus on three main aspects: 1) the importance of the GPs system as the "gatekeeper" in the primary health care (Baoping Shang, 2013) [2]. 2) The shortcomings of the Hungarian GPs system. Baji (2011) investigated 2500 patients to analyze the informal health care payment in 2007, the results showed that 9% of the patients had paid 2 euros in their last visit to a GP [3]. 3) To improve the Hungarian GPs system, Biró （2012） illustrated the imbalance between supply and demand has seriously affected the sustainable development of medical services, he proposed to enhance the rational utilization of medical resources from the macro, meso and micro perspectives [4].

From view of the Chinese GPs system: 1) Studies conducted also support these statements. Wei (2014) described the importance of a change medical services mode considering the rapidly increasing aging population and chronic diseases, and assures that setting up a family doctor system would be an effective way to deal with these issues [5]. 2) Part of scholars found some problems related to the GPs system. Some scholars showed some information asymmetry, since residents have low conscious on GP, which represents an obstacle to the development of the family doctor system in China (Jiang, 2016 [6]. Min, 2012 [7]). 3) One is suggestion and reference to the advantages of learning experience from other countries. Fang (2005) affirmed that residents over 16 years old could select one family doctor to register in the UK, moreover, they could also access to first consultation and referral to specialist outpatient or inpatient care [8]. Hungarian GPs system literatures can also be found in China. Xueli (2012) elaborated on the implementation of the "first-diagnosis system" in the Hungarian GPs system and considered greatly improved medical efficiency in the primary health care [9]. Regarding informal healthcare payments, Li （2007） believed that the distribution of burden on the "informal payment" among different income groups is analyzed through the investigation [10].

Therefore, having the opportunity to learn from the Hungarian GPs system would be of great benefit for the improvement of the Chinese primary medical services. However, little research reference can be found.

This article systematically to explores the framework and characteristics of the Hungarian GPs system, including the implementation principles, service framework, implementation process, development direction, payment mechanism, and incentive mechanism, as well as the effectiveness and difficulties they faced in order to provide inspiration for improving the efficiency of the Chinese GPs system.

III. THE MECHANISM OF THE GENERAL PRACTITIONER SYSTEM IN HUNGARY

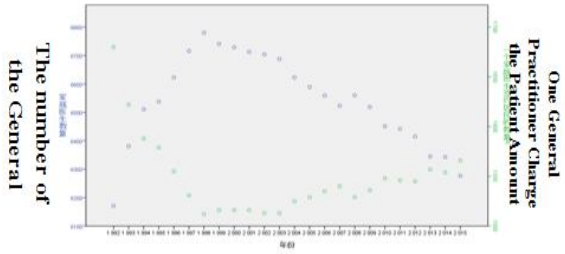
In Hungary, 60% of the adults in the community have gastrointestinal symptoms. Therefore, gastroenterology consultation accounts for 7%-10% of the total proportion of general practitioner consultation (WHO Regional Office for Europe, 2011) [11],[12]. In terms of the common diseases, the medical services efficiency reduces the number of patients that go to the hospital for outpatient consultations. Some principles as follows:

1) The development of the general practitioner system in Hungary. Medical insurance is now funded by a single payer's medical insurance fund, called the NHIFA (National Health Insurance Fund Administration). Historically, the Hungarian government took charge of the health care system in 1949, the "divisional doctors" system, which is local residents were not allowed to choose a doctor from their own community.

Then that, the Minister of Welfare's Decree established the GPs system in 1992, in which residents could freely and establish contractual relations with their family doctors. In 2007, the Hungarian government carried out another medical reform under the political parties' pressure, a patient should pay 300ft for a GP' s visiting. Yet, the visit fee was abolished in April 2008 by the president part and a referral system was established instead. Furthermore, the government introduced the performance allowance system in 2009, and refined it in 2011 in order to improve the GPs service quality.

Subsequently, the government has put forward plans for the primary medical care reform since 2012: (1) giving financial support to the GPs; (2) determining the first consultation system; (3) balance the human resources inflow and outflow in order to ensure the adequacy of the service. Later, the "2014-2020 public health plan" aims at improving the efficiency of the medical services and optimizing people's lifestyle.

Fig. 1. The number of the General Practitioners and One General Practitioner Charge the Patient Amount (Unit: person)



From: Statistical Yearbook of Hungary [M], Hungarian Central Statistical Office,2015:81.

http://www.ksh.hu/docs/hun/xftp/idoszaki/evkonyv/evkonyv_2014.pdf

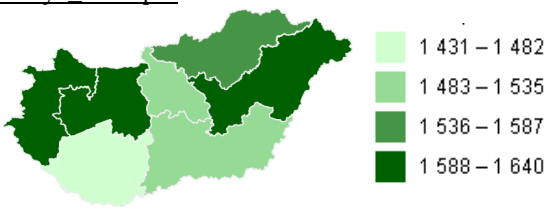


Fig. 2. The Area Distribution on the number of the General Practitioners in Hungary

(Unit: person)

From: Statistical Yearbook of Hungary [M], Hungarian Central Statistical Office,2015:81. http://www.ksh.hu/docs/hun/xftp/idoszaki/evkonyv/evkonyv_2014.pdf

Regarding the balance rate between GPs and signed contracts, figure 1 shows a rise in the GPs ' number due to the government financial support and the growing openness towards private medical awareness from 1992 to 1998. However, in 1999, when the government introduced a local law allowed the sale of doctor's licenses to practice medicine from seniors to young doctors, there was a huge decrease in the number of general practitioners, since young talented doctors pursued higher wages and chose to immigrate to other countries. Table. 1. shows the results, in which an overall rise in the number of general practitioners has been evident from 2005 to 2014. Mainly due to the arrival of general practitioners from less developed countries, such as Romania, Ukraine and Serbia, who came looking for job opportunities and recharged 1/3 of the local vacancy. Figure 2 illustrates the average number of residents attended by a doctor in different regions of the country. It is interesting how the central and southern regions are in low density while the eastern and western areas showed a larger density.

Table 1：Age of Hungarian General Practitioners (Unit: person)

Age／Year	2005	2010	2013	2014
-29	2596	2908	4394	4181
30-34	3097	3016	3296	3089
35-39	3394	3160	3471	3534
40-44	3707	3640	3629	3464
45-49	4258	3928	4061	4087
50-54	4844	4491	4384	4262
55-59	4109	4452	4959	4870
60-64	3477	3508	3950	4461
65-	3081	4840	5567	7046
Total	32563	33943	37711	38994

From: Statistical Yearbook of Hungary [M], Hungarian Central Statistical Office,2015:81. http://www.ksh.hu/docs/hun/xftp/idoszaki/evkonyv/evkonyv_2014.pdf

2) The implementation principles can be explained as follows: First of all, E-medical services for a continuous health care services played an appropriate medical infrastructure role, secondly, implemented a "biological-psychological" medical model that would replace the traditional treatment and focus on prevention and psychological effects. Later on, the first diagnosis and referral system was included to enhance patients to visit the GPs before going to the outpatient care, except in cases of emergency.

Thus, the first consultation system offered a rational of a full range of medical services (diagnosis, treatment, prevention, rehabilitation), in which simple diseases could be treated in the local GPs centers. Moreover, the establishment of the "two-way referral" system, which is used to transfer the patients to the higher level hospital in cases of complicated diagnosis or absence of the medical equipment in the community. Lastly, rehabilitation treatment would be carried out back in the GP centers or at home after receiving the proper attention at the hospital. In sum, the whole strategy involved treating "the small diseases in the community, the big illnesses in the hospital and the rehabilitation back in the community" [13].

3) The framework of the general practitioner system in Hungary: figure 3 displayed that Hungarian residents were asked for TVA medical cards, identity and address cards to be able to sign contracts with family doctors. In general, there are 6-8 GPs in the primary service center, and the residents can choose their preferred one. For diagnosis and treatment, a person can go directly to the health center, made an appointment with a family doctor, or request a home visit. Surely, in case of emergency, a patient can directly search for nearby emergency treatment instead of visiting the GP; the patients go back to the general practitioner office for further treatment.

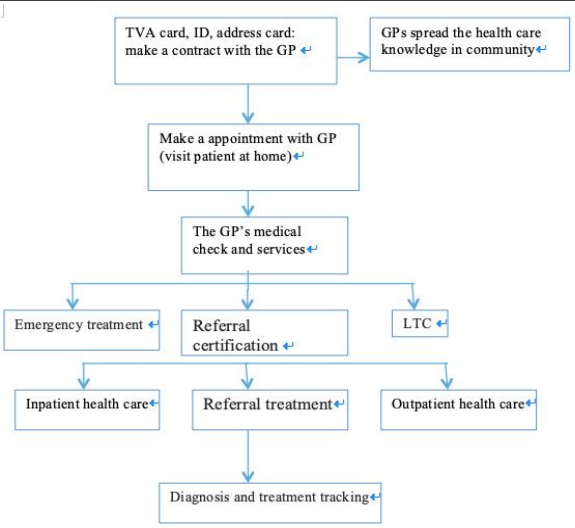


Fig. 3. The Framework on the General Practitioners System in Hungary

From: Statistical Yearbook of Hungary [M], Hungarian Central Statistical Office,2015:81. http://www.ksh.hu/docs/hun/xftp/idoszaki/evkonyv/evkonyv_2014.pdf

4) The development directions: firstly, the "supportive work of primary medical services" proposed by the Swiss-Hungarian cooperation project group, it aims at highlighting the family doctor functions for disease prevention, control and recovering from chronic diseases by 2020 [14]. Secondly, after selecting a coordinator, every GP should report to him/her on a daily basis, while the nurse report to their general practitioner. In addition, the EU's social regenerative business program (6.2.5B) gives guidance to the general practitioner system in Hungary by strengthening the communication system. Furthermore, during the implementation process, electronic medical services, such as online registration, electronic prescription, network referral, which facilitates the information access to the referral hospital, and an electronic prescription speeds up the process for pharmacy visits [15].

5) The payment method: before that, the prospective payment system refers to the costs are paid before the medical services take place, setting the standards and fees rates in advance, regardless of the actual cost of treatment model. Capitation belongs to the prospective payment system, which refers to supply and need between medical provider and the patient including diagnosis, consultant, and prevention costs. In 1992, the capitation payment was introduced for family doctors services, and it required a regular update of the number of registered individuals per practice as the foundation for general practice financing. Based on this, the population is divided into five groups and then assigned the following scores: Up to 4 years of age: get 4.5 points; between 5 and 14 years: 2.5 points; between 15 and 34 years: 1 point; between 35 and 60 years: 1.5 points; and over 60 years: 2.5 points (Moreno, 2009) [16]. According to the scores, the family doctor receives the calculated practice income directly from the National Health Insurance Fund Administration (NHIFA), which prevents corruption cases.

6) The incentive mechanism: based on the Hertz Berg ' s two factors theory (1959), salary level (basic wage, social security and payroll taxes) and training exchange are incentive factors to attract GPs. The payment methods are divided as follows: first is the contract residents are paid by the capitation. The Hungarian medical and health department has set the limits on the number of family doctors receiving registered residents; second is unsigned residents pay for the service; third is the GP can also be measured by the progressive salary method which was based on size and location. In 2009, the government introduced the performance allowance payment system, which was based on the quality of medical services. In 2010, the local government invested 300 million HUF, and in April 2011, the NHIFA increased the financial input to 3 billion HUF (around 8 million RMB) (Hajnal, 2012) [17]. Furthermore, to encourage family doctors on the financial side, their salary was increased by 130,000HUF (around 3500RMB) per month since January 2015. In the same year, the National Health Center showed that the average salary of a family doctor was at 400,000HUF (around 10800RMB) per month. Moreover, about 90% of the GPs have contracts with local governments can receive subsidies to purchase facilities and equipment cost (Eph MRA Repor,2009) [18].

Another important motivation aspect for the GPs is the training (communication opportunities). By 2013, there were 15.1 students who were majoring in health care among the 100,000 graduate students in Hungary. As figure 4 shows, from 2006 to 2016, the number of the medical graduates has significantly increased, resulting in a higher effectiveness. It involves the following principles: (1) "medical improvement" of the international public services to lift up the quality level of the services; (2) "value-based" referring to the preventive care by the GPs, towards the residents through frequent communication; (3) "need-based", which means that the doctor adopt the solutions after finding the problem; (4) "lifestyle consultation", which refers to the GPs concern not only about curing a disease, but also about providing good lifestyle advice to prevent illnesses. (5) "medical risk assessment", which describes the diagnosis and treatment of chronic diseases both psychological and physical; (6) strengthen the training to the assistants to establish a sense of cluster, communication awareness and better informed support to the GPs tasks. (7) the online training program happens every six months, to adjust training contents and methods according to feedback, face-to-face learning, exchange of experiences, and follow-up visits by the supervisory subcommittee every six or twelve months (IAP2, 2013) [19].

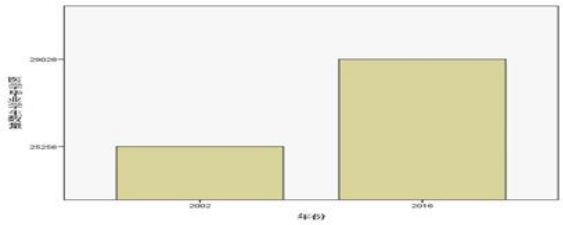


Fig. 4. The General Practitioners Graduates in Hungary between 2002 and 2016

(Unit: person)

From: Statistical Yearbook of Hungary [M], Hungarian Central Statistical Office,2015:81. http://www.ksh.hu/docs/hun/xftp/idoszaki/evkonyv/evkonyv_2014.pdf

IV. THE PROBLEM OF THE GENERAL PRACTITIONER SYSTEM IN HUNGARY

Before introducing problem, the effectiveness was put forward. The achievements of the Hungarian GPs system not only include the integration of macroscopic medical resources and the perfection of a contract referral mechanism, but also the focus on the promotion of residents' awareness and the knowledge about GPs system. To start with, Patient's awareness of the first contract participation is high. Figure 6 shows that the first consultation has increased from 2000 to 2005. Yet, figure 5 shows the declined from 2005 to 2013, which is a result of a focus on prevention, strengthened health management and publicity, thus, reducing the incidence of common diseases among the community residents. Then, it is the two-way (upward/downward) referral participation system. As can be seen in Table 2, the rehabilitation work is carried out by the GP, the number of patients referred to the higher level hospitals by Hungarian family doctors shows an upward trend in general from 2008 to 2015, in which most of the patients referred to the family doctor's office are given special care. Final is the intensive salary and training is remarkable. As can be seen from Table 3, the GPs system has stabilized in Hungary since 2000. 1) The average annual income of the GPs is 400,000 forints, which is 50% higher than the local average income.

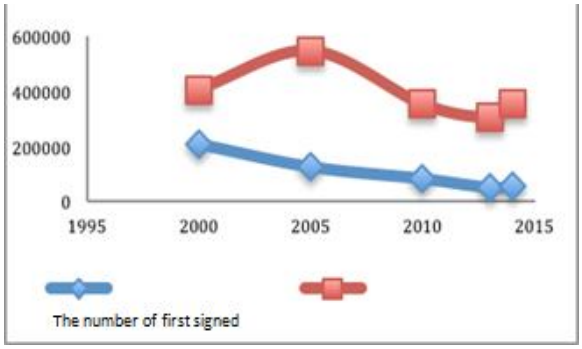


Fig. 5. The number of first signed patient and diagnosis after prevention during 2000 to 2014

(Unit: person)

From: Statistical Yearbook of Hungary [M], Hungarian Central Statistical Office,2015:81. http://www.ksh.hu/docs/hun/xftp/idoszaki/evkonyv/evkonyv_2014.pdf

Table 2： The Number of Referral Care Received by Hungarian General Practitioners during 2008 to 2015 (Unit: person)

Item \ year	2008	2009	2010	2011	2012	2013	2014	2015
Special Nursing	26402	23732	23035	24572	26177	27333	28567	26306
therapy service by speciality	25651	26089	27406	28937	28948	31739	35253	33679
Physiotherapy	21245	21855	22918	24480	24549	27228	31217	28304
physicotherapy	4301	4130	4346	4335	4227	4340	3853	5236
speech therapy	105	104	142	122	172	171	183	139
Total	52053	49821	50441	53509	55125	59072	63820	59985

From: Statistical Yearbook of Hungary [M], Hungarian Central Statistical Office, 2015:81. http://www.ksh.hu/docs/eng/xstadat/xstadat_annual/i_fek001b.html

Table 3： Different Areas of GPs' Number and One GP charge the number of patients

year \ Items	2000	2005	2010	2013	2014
The GPs' Number					
Budapest	993	979	962	947	937
Other Cities	2202	2338	2388	2431	2419
Rural Area	1964	1701	1576	1495	1494
Total	5159	5018	4926	4855	4850
One GP charge the number of patients					
Budapest	1340	1285	1338	1377	1400
Other Cities	1434	1493	1523	1509	1499
Rural Area	1661	1766	1755	1798	1788

(Unit: person)

From: Statistical Yearbook of Hungary [M], Hungarian Central Statistical Office,2015:81. http://www.ksh.hu/docs/hun/xftp/idoszaki/evkonyv/evkonyv_2014.pdf

According to Balabanova (2002) informal payments is "monetary or barter trade between a patient and health care professional for services officially free of charge in state health facilities" [20]. Thus, this part illustrates the situation, reasons of the informal

payment problem. The patients complained about the medical services, therefore, they usually are willing to pay high prices for better medical treatment. In fact, the informal payment was prevail in the general practitioner system in Hungary. Baji (2014) examined the willingness of health care consumers to pay informal payments in Hungary from a survey carried out in 2010 among a sample of 1037 respondents, through the method of the bivariate probit model, they finds 56% of the respondents are willing to informal payments if they could enjoy the high quality of medical treatment [21]. Although the Hungarian government adopted various measures to restrains the informal payment, yet, it is still a hot question to discuss about it. Therefore, the reasons for the exists of the informal health care payment should be explained. 1)Social–cultural factors. In Hungarian social and cultural background, informal payment was a custom referred to as "tipping fee". 2) Legal–ethical factors. Initially, the level of ethics of the doctors in Hungary was lower, so they not only received salaries, but also additional patient gifts. Ádám (1985) extended the argument by explicitly denying the sorts of forms of informal payment could emphasized the legal ambiguity surrounding the problem as the cause to the in-kind gifts and meaningfully be separated in practice [22]. 3) Economic factors. From the demand side perspective, Petschnig (1983) supported his famous assertion "Freeness makes ill" that implied free access to health care service with the infinite demand resulting in artificial shortage was responsible for this problem [23]. Bordás (1993) focused on the supply side explanation, argued that regardless of the actual level of doctors salaries, the line item budgets and salaries were inappropriate payment mechanisms since they didn't know provide any incentives to productivity increasingly [24].

V. HUNGARIAN GENERAL PRACTITIONER SYSTEM ENLIGHTENED EXPERIENCE TOWARDS CHINA

Regarding the current situation of GPs system in China, the enforcement of "the State Council's Establishment of General Practitioner System" in 2011, leading to clear status on the health care strategy (State Council's Guidance, 2011) [25]. However, there are still some problems. First of all, the referral mechanism is imperfect. Although the goal of building a community-based health care service center with GPs system is clear, the platform for resource integration is relatively weak, appeared on the specific operation process of two-way referral and technical training. Secondly, the community residents lacks of the awareness. In China, it is difficult for community residents to seek family doctor medical treatment in the short term. At the beginning of the 21st century, the status of medical insurance "one-card pass" made patients free to visit the doctor without the first diagnosis, making it difficult for the GPs to manage the localization. At the same time, some residents were worried about the first consultation system limits the right to free medical treatment and delays the physical condition (JinHua, 2011) [26]. Thirdly, the supply and demand of general practitioner are imbalance. At the end of 2015, domestically registered number of family doctors accounts for 6% of the total number of doctors, which has grown from 2012 to the number of the 17.2 million in 2015 [27]. According to guideline, it is still far road to reach the requirement, which one GP charge for the 2000 residents by the end of 2020 (Chinese Medical Doctor Association, 2016) [28]. Evidently, the incentive mechanism is not perfect as shown by a five-year study program including bachelor students, where the number of GPs was proven far below the international standard of 1: 2500. (Chinese Medical Doctor Association, 2016) [29]. Fourthly, lack of specialized training programs for the GPs. Many existing family doctors are mainly transferred from specialists, and there is no long-term, comprehensive family doctor training experiences. Thus, it is meaningful to introduce Hungarian GPs System enlightened experience towards China. Having experiences nearly 30 years in Hungary, it can offer the empirical part to China that the GPs system just recently started. Successfully experiences can be learned from Hungary, for instance, capitation, first diagnosis and referral system. But, informal payment for health care brings inequality should be avoided.

5.1 Establishing the signed-referral mechanism

From the family doctor's view, they would like to get one capitation fee if people signed and visit, thus, it clearly stipulate the obligations and rights of GP and patient. Moreover, the medical service agreement is the foundation, which is the basis for guiding the community's first consultation and two-way referral services, so that it can form fixed-point, step-by-step medical treatment orderly situation. According to the stakeholder theory, there is necessary to consider the balance between interests of GPs and residents. Therefore, China needs to establish a multi-channel grading diagnosis and treatment channel under the organizational system, whether it is the grassroots community service center or the effect of the second- and third-level hospitals. A point we should to consider is that guiding the role of medical insurance funds, building the government's assessment of family doctors, which combined with service effects, health outcomes and social benefits for the GPs, it is based on various aspects, optimizing income structure, and developing family doctor services. In conclusion, it should establishing the assessment indicators to family doctor, from the view of quantity, quality and effect, resulting in forming incentive mechanism oriented to contracted medical services.

5.2 Strengthening community residents' awareness

The medical service is continuously improved by the GP in order to get the recognition of community residents and increase the signing rate. Currently, the GPs system gradually understood and accepted by the residents, though, superficial on the aware of basic concepts, not clear about the service connotation. This makes the unsigned residents always in the consideration. Thus, it should be finding a breakthrough point to strengthen the awareness of community residents the GPs system. As the old people have a growing demand for these services due to their mobility inconvenience and serious medical cases. Official data from the National Bureau of Statistics survey in Shanghai was released in August 2015. The "Satisfaction Survey on the Need for Community Service among Old People" shows that 46.7% elderly people express strong feelings on the implementation of the GPs system [30]. The relationship between the issue of the GPs system and the aging problem is essential for the development of the current situation in China (Junlei, 2010) [31]. Therefore, choose a good entry point in China and strive to increase the signing rate of family doctors is important issue.

5.3 Balancing the supply and demand of the general practitioner

Figure 6 had utilized the OECD data to analyze family doctors in 2016. In terms of relative data, there are 1.7 family doctors among 1000 residents in China while are 3.2 family doctors per 1,000 inhabitants in Hungary, nearly twice as close as China, with a global average of 3.02. To solve insufficient supply and demand of GPs' problem, it is necessary to set out the first consultation and two-way referral system, which involves not only the relationship among the GPs, patients and hospitals, but also the redistribution of medical resources. Furthermore, explained by the supply perspective, the number of family doctors is determined by the actual number and activity rate (such as the average working time of family doctors). Additionally, from the demand view, changes in demographic structure (especially the rate of aging), the expansion of medical insurance coverage, the change in residents' medical awareness and so on.

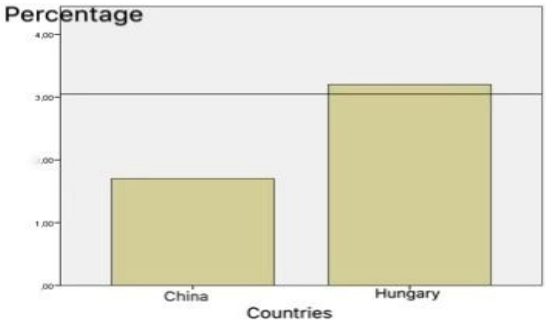


Fig. 6. The percentage of one GP among 1000 residents in 2013 Between China and Hungary

(Unit: percentage)
From: Statistical Yearbook of OECD [M] https://data.oecd.org/healthres/doctors.htm

5.4 Improving the training level for the general practitioner system

The education in general medicine in Hungary adopts the "6+3" model, which is 6 years of clinical medical undergraduate education, plus 3 years of basic training for the "standardized training for family doctors", in addition to general clinical medical training, three and a half days into the community every week is necessary. After 6 years of study and training, it should have the ability to use essential drugs, deal with common diseases, do the on-site rescue, provide community rehabilitation medical services and be able to communicate psychological problems. Comparatively, In China, medical master students have been studying theoretical knowledge for three years, and they need to go to the communities for an internship in the last half year. Therefore, some solutions need to be taken into enforcement to improve the training skills. First of all, improve the knowledge system in university, so that the curriculum is in line with the knowledge system construction serves the post-standardized training, and it focus on preventive medicine, behavioral medicine modules and practice modules. Secondly, strengthen standardized training, combining theory and practice, combining medical theory knowledge with community medical service work, in order to cultivate the family doctors who meet the medical needs for the community. Specifically, it is possible to take one-on-one teaching and special case discussions with responsible instructors. Finally, focus on updating knowledge. The basic skills and abilities of family doctors should be regularly assessed by relevant departments and trained to form living knowledge.

5.5 Building up incentive mechanism

Firstly, an effective salary incentive mechanism been taken into enforcement. According to capitation payment, the family doctor is encouraged to achieve health intervention at the source. The assessment to the general practitioners' teams can be divided into team workload, actual volume, chronic disease medical management services and some additional factors. In China, general practitioners' income is still on the traditional salary system. Zhang Kai's research showed that the average monthly income of family doctors is only in the range of 2000-3000RMB (around 80,000-120,000HUF), far lower than the income of specialists, resulting in the retention of family doctors. (Kai, 2010) [32]. We can see from Figure 7 that in terms of per capital on the health care expenditure in 2014, whether it is public health expenditure or private health expenditure, Chinese public medical investment is significantly less than

that of Hungary. Therefore, the government adopts a targeted subsidy mechanism to increase the income of family doctors in order to attract talents and retain talents in China. Secondly, strengthen communication by the training mechanism. The Hungarian family doctors team are worthy of reference for the construction in China. This kind of training need to do practical and profound roles. In addition, online training is also a new type of training. In Hungary, it conduct questionnaires on family doctors every six months, adjusted the appropriate training content and methods according to feedback, also, set up supervision teams or committees.

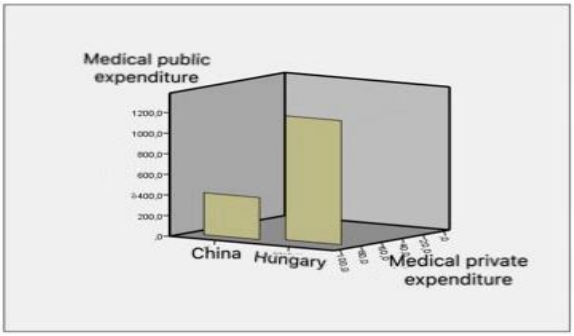


Fig. 7. Medical public expenditure and private expenditure in 2013 between China and Hungary

(Unit: EUR, million)

From: Statistical Yearbook of OECD [M] https://data.oecd.org/healthres.htm

5.6 Avoiding the medical informal payment

As "grate" exists in China, "tip" was highly awareness for the long term in European area, however, the informal payments of health care influence the distribution of services and resource allocation. At the personal level: Obviously, informal payment did yield better quality of health care for the paying patients than non-paying, meanwhile, non-paying patients should spend longer time for treatment. The other individual impact is about incentive mechanism towards doctor, for example, provides outdated equipment or reuse of disposable medical supplies. And, the existence of informal payments seriously affected normal run of the health care system. Chinese government began to implement policies to control such a "bribe", As soon as found informal payment, the doctor's qualification certificate will be revoked. In the year of 2004, Ministry of Health in China developed a regulation called "Strengthening the Health Sector Style Constructions", in the item of rules, informal payment issues clearly defined, such as drug rebate, "red packets". Doctors will be expelled from the team if the medical person disobeys the provision. Since 1st May 2014, both the patients and doctors should sign the agreement promised not to receive/send the gift/cash in hospital which called "secondary hospital(er jia yiyuan)" in China. In the health care process, incentives and accountability mechanisms which is multi-level performance including regulations, governance and service should be established. In addition, shifting the emphasis on prevention system construction, such as increased education efforts to alert the medical staff and ethics awareness training. From the patient's perspective, strengthening the trust between patients and doctor. Practically, China could learn from Hungary, like working up GP system, strengthening the training of GP; implement the outpatient services by capitation and inpatient services by method of DRGs, etc.

CONCLUSIONS

The general practitioner system is one of the most important medical reforms, which improve health care effectiveness, but it is also an innovation in China, consequently, a new academic territory to highlight and explore. As previously expressed, revising the Hungarian GPs system would be a very significant referent for China, regarding their experience in implementation, problem solving, issues, etc., mainly because the available literature about the Chinese general practitioner system is limited, since the GPs system still represents an innovation to China. Moreover, using the comparative methodology is useful to summarize the experiences. However, there also exists limitations in relation to the varied economic situation and needs among different areas in China, which should be considered for the implementation of the GPs system. Thus, making it difficult to investigate all geographical areas of China. Fortunately, it is possible to get a short-term overview based on first-hand data that is the purpose of this study, but the effective collection of a higher amount of data will happen in the long term.

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