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DOI:  
10.4103/jehp.jehp\_709\_19

# Family physician model in the health system of selected countries: A comparative study summary

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## Abstract:

**BACKGROUND:** In the 21<sup>st</sup> century, with the epidemiological and demographic transition and the changing nature of diseases and the increase in the burden of chronic diseases, the need to strengthen primary health care and the development of the family medical program as a strategy is felt significantly.

**AIM:** The purpose of this study is to compare the model of implementation of family physician program (FPP) in the United States, England, Germany, Singapore, Turkey, Egypt, and Iran.

**MATERIALS AND METHODS:** This is a comparative study that examines the model of family physician implementation in selected countries. Data for each country were gathered from the valid databases, were compared according to the comparative table, and analyzed by a framework approach. In order to assure the validity of data, the researchers referred to the websites of the selected nations' Ministry of Health and also cross-checked the findings with reports published by the World Health Organization.

**RESULTS:** In this study, we used the Control Knobs framework to compare countries' FPPs because the framework can demonstrate all necessary features of national health system programs. This framework includes governance and organization, regulation, financing, payment, and behavior in each country. The results of this study show that although the principles of FPP in the selected countries are almost common, they use different methods in FPP implementation.

**CONCLUSIONS:** As the success of any policy depends on the political, economic, social, and cultural context of each country, considering these factors and reinforcing each of the control knobs are critical to the success of the family physician's policy implementation.

## Keywords:

Comparative study, Control Knobs, Family Physician Program

## Introduction

Nowadays, the importance of health as one of the most important human concerns has led the researchers to purposefully study the health system reforms.<sup>[1]</sup> The health systems are always reformed to increase efficiency and effectiveness, create justice, and provide people's access to health services.<sup>[2]</sup> In this regard, attention to the principles of primary health care (PHC) is still recognized as an

essential principle for achieving this goal.<sup>[3]</sup> Therefore, the researchers believe that they should support the restoration of PHC more than ever to restore greater integration into in the current fragmented context of health systems.<sup>[4]</sup> This valuable point has made health system policymakers around the world to look for an effective model to provide PHC.<sup>[5]</sup> According to most experts and based on the experiences of several countries, stratification of health services and family physician program (FPP) can be the main solution for many of the problems of the health-care system in the world.<sup>[6-8]</sup>

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**How to cite this article:** Mohammadibakhsh R, Aryankhesal A, Jafari M, Damari B. Family physician model in the health system of selected countries: A comparative study summary. *J Edu Health Promot* 2020;9:160.

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Received: 27-11-2019  
Accepted: 20-01-2020  
Published: 30-06-2020

Various studies have shown that the family physician has a better correlation with health outcomes, even in areas where equity in health is poor.<sup>[9,10]</sup> The World Health Organization (WHO) also acknowledges that family medicine is the basis for quality improvement, cost-effectiveness, and equity in health-care systems.<sup>[11]</sup> For this reason, the family physician has become one of the most important reforms in the development of health systems in recent decades.<sup>[12,13]</sup>

In many North American and Western European countries, a family physician is the basis for providing health services.<sup>[14]</sup> Several countries in the eastern Mediterranean region are also at different stages of implementing a FPP.<sup>[15]</sup> In the Arab world, this specialty is relatively new, and the health system implements PHC as a health policy and trains physicians for this purpose.<sup>[16]</sup> Various studies have also shown that different family models are being implemented and implemented in different countries by different models.<sup>[17-19]</sup> In fact, the actions taken in this regard in each country are rapidly changing in light of the conditions of industrial societies and the trends of development of countries, the public insurance industry, and policymakers' attitudes to health.<sup>[20]</sup>

Therefore, there is always the question according to the context, which model is appropriate to achieve better outcomes by implementing a FPP and what are the requirements needed to achieve policy goals. Therefore, the purpose of this study was to compare the model of family physician implementation in selected countries using the health system Control Knobs framework and analyze the important components of this program.

## Materials and Methods

This is a comparative study comparing FPP implementing in selected countries. In selecting countries, the service delivery models were considered: private-based system, National Health Service (NHS) (taxation as the main source of financing), social insurance, and medical savings accounts. Also, having successful experiences and policies in implementation of the FPP and having credible evidence available in countries were considered in the selection of countries. In this regard, literature review and experts' opinions were used. On the basis of the above, the United States, England, Germany, Singapore, Turkey, Egypt, and Iran were selected for comparing their FPP model.

Using a standard framework can increase comparability. In this study, we used the Control Knobs framework to compare countries' FPPs because the framework can demonstrate all necessary features of national health system programs.

These control knobs included organization and governance, regulation, financing, payment, and behavior.<sup>[21]</sup>

In the regulation, four components of family physician education, family physician evaluation, referral system, and electronic health records were considered. Also, in behavior Control Knob, conflicts of interest between family physicians and specialists were considered [Table 1].

For data collection, a table was designed, and each of the above items was completed for each country by searching for valid sources. These sources include PubMed and Scopus databases, Google search engine and Google Scholar, the website of the Ministry of Health and the countries' Department of Health, the WHO and the World Bank, and the OECD library website. The framework analysis was used to analyze the data. To this end, the differences and similarities among countries were compared based on the information extracted from the comparative table [Table 2]. In order to assure the validity of data, the researchers referred to the websites of the selected nations' Ministry of Health and also cross-checked the findings with reports published by the WHO.

## Results

### The United States

The federal government is in charge of organizing and regulating the health system in the US. The US financing is done through collecting general taxes and prepayments. These revenues are allocated to Medicare, Medicaid, and health plans for payments to general practitioners (GPs), family physicians, and specialists.<sup>[14]</sup> The payment mechanism by Medicare and Medicaid as well as payment of managed care is fee for service. The health maintenance organizations (HMOs) and preferred provider organizations (PPOs) pay the physicians by fee for service and per capita. Some large HMOs pay salaries to the physicians.<sup>[22,23]</sup>

Overall, in the US, insurers and health programs use Fee For Service (FFS), capitation, and salary to pay the primary care physicians and the specialists. The "Pay for Performance (P4P)" also rarely accounts for more than 5% of an American physician's payment. The out-of-pocket (OOP), insurance cooperation, copayments, and value-added tax have also increased significantly in recent years for health services.<sup>[14]</sup>

The family physician training begins at the medical school, continues through residency, and lasts throughout a physician's career. After graduation from medical school, the next step is to complete a residency in family

**Table 1: Definition of control knobs framework**

Control knobs	Definition in this study	Definition
Organization and governance	It primarily affects how individual organizations are organized and managed, thus impacting efficiency, quality and availability of health services. In this study the organization refers to who organizes and manages the levels of primary, secondary, and secondary health care.	
Regulation	Regulation, in a narrow and clear sense, refers to the government's use of coercive power to impose constraints on organizations and individuals. In this study, the regulations regulate the use of power by the government for:	
	1. Design referral systems and limiting the number of referrals by family physicians to specialists.	
	2. Design an electronic health record (EHR) and make regulation to access patient information and maintaining confidentiality.	
	3. Requiring physician to receive specialized training and practice as family physician	
Financing	Financing refers to the way in which money is mobilized and how it is used. It is a major control knob that affects outcomes such as health status and its distribution, and risk protection. In this study financing refers to the way in which money is mobilized and how it is used for family physician program.	
Payment	Payment refers to the methods by which money raised by financing is paid out to individuals and organizations. The payment modality is the principal control knob for establishing incentives in the provision of health services. In this study Payment refers to the methods by which money raised by financing is paid out to family physicians, GPs and specialists.	
Behavior	The behavior of policy makers, managers, physicians and people after implementing a health policy or health plan. In this study considered the conflict of interest between family physicians and specialists due to implementing a family physician program and referral system.	

EHR=Electronic health record, GPs=General practitioners

medicine. Students apply to and interview for residency program placement during the last year of medical school.

In medical school, students take two "Step" exams called United States Medical Licensing Examination to be permitted to begin full clinical practice in a family medicine residency program. The Accreditation Council for Graduate Medical Education assesses the activity of physicians.<sup>[24]</sup>

In some insurance programs (HMOs), family physicians play the gatekeeping role. With some types of insurance such as PPOs, people may directly refer to a specialist. The uninsured people often do not have PHC providers and go directly to community health centers and hospital emergency rooms.<sup>[25]</sup>

Recently, based on the national laws, the use of electronic health records (EHRs) by providers has increased and their information exchange between organizations has enhanced.<sup>[26]</sup>

Tendency to specialization in the US has put GPs in a lower rank, which has led to conflicts between GPs and specialists. This conflict continues to persist due to the "Turb Battles" and the economic difference in reimbursement between specialists and GPs. Therefore, implementing a family physician program and referral system because of the reduced income of specialists can create a conflict of interest.<sup>[14,27,28]</sup>

### England

The UK health-care system operates as a NHS. The government allocates money for health care in England directly. The major source of health financing is made

through general taxes and the other is provided by private insurance companies and OOP payments. The Department of Health allocates funds using weighted capitation to the GP groups, forming clinical commissions such as specialist and primary care services.<sup>[29]</sup> Payment to family physicians is a combination capitation and pay for performance. The physicians in the private sector receive per case. Pay to specialists that employed by NHS hospitals is salary, and those are outside of the NHS hospitals is fee for service. Payment by results and pay for performance schemes have been introduced in order to encourage improved quality of care.<sup>[28,30]</sup>

In England, the individuals who have received a basic medical degree must pass two additional stages of specialized training to be qualified as GP. The physicians require succeeding in the membership of the RCGP assessments. Continuing professional development is required of all doctors. This program is monitored through an annual evaluation and a 5-year re-validation process.<sup>[28]</sup>

In England, registration with a GP is required and GPs have a gatekeeping role.<sup>[29]</sup> An EHR is created for patients that enter to NHS service center. This EHR is linked to other levels of health system.<sup>[31]</sup> There is no conflict of interest between specialists and GPs in England.<sup>[31]</sup>

### Germany

The German health system is a Bismarck model. The Ministry of Health pays the resources collected through general taxes, insurance taxes, and private and public insurance premiums to the Statutory health insurance (SHI) and monitors them. In Germany, different levels of government have almost no role in direct financing or providing health care. This responsibility is

**Table 2: Model of family physician program implementation in selected countries**

Country	Service delivery model	Organization and Governance	Regulation			Electronic health record	Financing	Payment		Behavior (Conflict of interest between physicians and specialists)
			Family physician evaluation (accreditation)	Referral system	Family physician training			Family physicians/GPs	specialists	
USA	Private based system	Federal government	Yes	Yes/Elective	Yes	Yes	1. General Taxes	FFS	FFS	Yes
				Registration with GP required: No Gatekeeping: In some insurance programs		2. Premium payment 3.OOP	Capitation Salary P4P	Capitation Salary P4P		
England	Beveridge Model National health system (NHS)	Department of Health and the Secretary of State. transferred important functions to NHS England	Yes	Yes/Compulsory	Yes	Yes	1. General taxes 2. Private Insurance 3. OOP	Capitation FFS P4P Salary	Salary	No
				Registration with GP required: Yes Gatekeeping: Yes						
Germany	Social health insurance (Bismarck Model)	Federal government (Ministry Of Health).	Yes	Yes/Elective	Yes	Yes	1. General taxes 2. Insurance taxes 3. Private and public premiums 4.OOP	FFS: family physician care model Capitations: SHI physicians Salary: hospitals physicians	Salary	Yes
				Registration with GP required: No Gatekeeping: Generally No, present in specific programs by sickness funds						
Singapore	Medical Savings Accounts (MSAs)	Ministry Of Health(MOH)	Yes	Yes/Elective	Yes	Yes	1. Direct government subsidies 2. Compulsory savings 3. National healthcare insurance 4.OOP	FFS	Salary: Public outpatient system specialists Global budgets and case-based payments: For public hospitals	No
				No, but public referrals to provide services in subsidized prices						
Turkey	Social health insurance (Bismarck Model)	Ministry Of Health(MOH)	Yes	Yes/Elective	Yes	Yes	1. Social health insurance and premium payment 2. General taxes 3.OOP 4. Private insurance	Capitation P4P	Salary P4P	No
				Registration with GP required: Yes Gatekeeping: Yes						

Contd...

Table 2: Contd...

Country	Service delivery model	Organization and Governance	Regulation		Electronic health record	Financing		Payment		Behavior (Conflict of interest between physicians and specialists)
			Family physician evaluation (accreditation)	Referral system		Family physicians/GPs	specialists			
Egypt	Social health insurance (Bismarck Model)	Ministry Of Health(MOH)	Yes	No	No	1. Social health insurance 2. General taxes 3.OOP	Salary P4P	Salary FFS	No	
			Yes	Yes/Elective	Yes	1.General Taxes 2. Social health insurance 4.OOP 4. Private insurance	Capitation FFS	FFS	Yes	
Iran	Public assistance system	Ministry Of Health(MOH)	No	Registration with GP required: No Gatekeeping: No	Yes					

EHR=Electronic health record, MOH=Ministry of health, NHS=National health service, MSAs=Medical savings accounts, OOP=Out-of-pocket, FFS=Fee for service, P4P=Pay for performance, SHI=Social health insurance, GPs=General practitioners

mainly vested to independent associations in insurance funds and provider associations, which are represented together by the Federal Joint Committee.<sup>[32]</sup> The reimbursement for family physicians who are members of the family physician model is done through a combined method of merit pay and additional rewards based on the provision of specific services (such as prevention). There are control mechanisms as imperceptible inspection to prevent false claims as well as providing inadequate service. The GPs and specialists working in hospitals are on pay salary. The P4P is not yet launched.<sup>[33]</sup>

GP training in Germany takes 5 years. The physicians who have completed their basic training and wish to become a GP apply to a licensed institution and receive the necessary training. The professional associations of physicians are responsible for legislating, promoting, and overseeing the continuing professional training of their members.<sup>[19]</sup> Individuals are free to choose to go to GPs, specialists, and, if necessary, hospitalization. There is no need to register with a family physician and the GPs do not have any formal gatekeeping role.<sup>[34]</sup> In case of choosing a family physician care model, these physicians will play a role of surveillance. The electronic health cards (eGK) are used nationwide by all SHI insurers. In 2015, the federal cabinet passed the Electronic Health Act, which, if the programs do not pay attention to it, some incentives or penalties will be imposed.<sup>[32,35]</sup>

The competition between different medical disciplines, especially between specialists and GPs as well as between salaried physicians in hospitals and office-based physicians in the ambulatory sector, has been escalated and the conflict of interest continues until now.<sup>[32]</sup>

### Singapore

The Ministry of Health is responsible for authorizing and organizing Singapore’s health system. The primary care sector is often provided by private clinics of GPs, which are overseen by the Ministry of Health. Financing in the Singapore Health System is mixture of direct government subsidies, medical savings accounts, national health-care insurance, and cost sharing.<sup>[36]</sup> Singapore’s health system is strengthening its relationship with the private network.<sup>[37]</sup> The Community Health Assist Scheme subsidizes these networks to serve low- and middle-income earners. Specialists working in the public outpatient system receive salaries. Family physician payment is FFS. Family physician education in Singapore includes two programs A and B. Master of Medicine (Family Medicine) – Program A. The formal 3-year vocational training program that followed the Diplomate program was targeted at residents in the Ministry of Health. The private practitioners’ stream (Program B) was set up for private practitioners who did not complete their vocational training



programs but were still keen on improving themselves vocationally.<sup>[38,39]</sup> The Singapore Medical Council in January 2003 required CME for Singapore physicians to renew their business licenses. In Singapore, patients can choose their primary care physician and registration is not required. Physicians provide private care to their patients, but usually do not act as a gatekeeper. Singapore is building a sophisticated national EHR system.<sup>[40]</sup> The long-term goal is to allow medical professionals to access clinical data on patient treatment and safety.<sup>[8]</sup> There is good cooperation between GPs and specialists and there is no conflict of interest between them.<sup>[38,41]</sup>

### Turkey

In Turkey, the Ministry of Health (Sagollik Bakanligi) is responsible for governance, which provides primary, secondary, and tertiary care through its facilities throughout the country. The health services are currently provided through social insurance organizations covering the majority of the population. The private sector has covered a wide range of services in recent years.<sup>[42]</sup> Turkey supplies health-care services from several sources. The health insurance partnerships are leading in this country, and then, there are government resources, OOP payments, and other private resources.<sup>[43]</sup> The public health costs in Turkey are funded by the Social Security Institution under the supervision of the Ministry of Labor.<sup>[44]</sup> Turkey has an integrated payment system for health personnel. After the family physician plan is fully implemented, they will be paid per capita, which is the only payment method for these doctors. A mandatory referral system from primary care to hospital is included in the performance-based payment plan. Salaries are paid to the hospital physicians and specialists. There is also a pay for performance.<sup>[45]</sup>

The existing GPs work as a family physician after a transition phase. In the first phase, physicians who received adaptive training will be allowed to work as a family physician. During the second phase of training and as a family physician while working, systematic and extensive continuous trainings are provided and the competency of the physicians is evaluated by qualification tests. Then, the physicians will be qualified for the title of "Family Physician Specialist."<sup>[46]</sup> In the Turkish health system, the family physician decides whether or not the patient needs to consult a specialist.<sup>[47,48]</sup> The use of EHRs is being implemented in all family health centers, which easily provide the required information to health authorities and insurance institutions.<sup>[49]</sup> Given that the family medicine program has been implemented in Turkey and the payment to specialists is done in the form of salaries, there seems to be no conflict of interest between the family physicians and the specialists.

### Egypt

In Egypt, the Ministry of Health provides health services for free. Social health insurance is the main method of financing and then other methods, especially general taxes. Government providers receive their public revenue from the state public budget. Employees are subject to government employment law and receive salaries. Those who work in the private sector are paid through FFS method. The "performance-based incentives" are considered to achieve constant goals for the family physician.<sup>[37]</sup>

The family physician specialists have higher salaries than other specialties. The family physician education program does not require any further education as an entry requirement and includes staying in family medicine for 3 years.<sup>[50]</sup> The current curriculum of "Comprehensive Education in Family Medicine" is organized by the Sector for Technical Support and Projects, and one of the most important interventions of the HSRP is the introduction of family medicine expertise in the medical schools.<sup>[51]</sup> Conventionally, there is no organized referral system in the Egyptian health system and there is no limit to one's access to hospital services.<sup>[52]</sup> It still does not have a structured EHR.<sup>[53]</sup> As there is no structured referral system, there does not appear to be a conflict of interest in reducing specialist patients and their income.

### Iran

In Iran, the Ministry of Health is responsible for governance. The main methods of financing the family physician in Iran are provided through taxation and insurance premiums paid to insurance organizations.<sup>[54]</sup> The main role of public funding in financing Iranian health services focuses on health-care service coverage. The GPs working in the family physician program are paid per capita. If the insured patients see a specialist directly, they must pay a percentage as a payment contribution. The uninsured patients must pay the full cost to physicians in private practice or hospitals OOP. The most common payment method for specialist physicians in Iran is the FFS.<sup>[54]</sup>

General medical education system in Iran lasts 7 years. The specialized family medical education is currently underway. There is no accreditation evaluation system for family physicians. There is no structured referral system in Iran.<sup>[55,56]</sup> There is currently no comprehensive and proper electronic record in Iran and different levels of the health system are not linked to it. Completing an EHR in Iran requires substantial infrastructure development.<sup>[57]</sup>

Given the fact that tendency to see specialists in Iran is high and the most common model of payment to

specialists is through FFS, thus, there is a sharp conflict of interest between GPs and specialist physicians. This will be exacerbated by the implementation of the compulsory referral system.<sup>[58]</sup>

## Discussion

The purpose of this study was to compare the FPP in selected countries using the Control Knob framework. The results of the comparative study showed that the principles of the FPP in the selected countries are almost common, but at different stages of implementation, they use different strategies that should be considered in the model of countries' implementation.<sup>[59]</sup>

In this study, in all of the countries, the Ministry of Health is responsible for policymaking and overseeing the implementation of health policies. This study shows that strong governance in countries such as England lead to implementation of national programs such as FPP is successful.<sup>[28]</sup>

All selected countries except Egypt and Iran have family physician specialties. Of course, studies in Canada and Australia, however, have shown that in recent years, the number of medical school graduates choosing a family physician as a specialty has declined because of the load of working and payment problems.<sup>[60,61]</sup>

Studies showed that family physician training should be conducted in a realistic setting. In the US, the emphasis is on educating the family physician in an appropriate and realistic environment.<sup>[14]</sup>

Considering appropriate evaluation systems is essential in designing and implementing health plans such as family physician. Accreditation is one of the most common methods of evaluation in family physician and primary care centers in most of the selected countries.<sup>[62]</sup> This study showed that in England and Turkey, registration with GP/family physician is required, and family physicians have a gatekeeping role.<sup>[28,44]</sup>

In Germany, family physicians in some of the disease funds have a gatekeeping role.<sup>[32]</sup> In some countries, such as Australia, registration with GP is not required, and family physicians have a gatekeeping role.<sup>[60]</sup> There is traditionally no systematic referral system in the health system of Egypt and Iran. Therefore, there is no restriction for access to specialist levels and hospitals.<sup>[58,63]</sup>

Studies showed that in health systems that family physicians play a gatekeeping role, health costs are low.<sup>[64]</sup> In countries where there is no formal gatekeeping role for family physicians, incentives have been provided

to strengthen of this role for family physicians. For example, although it is not prohibited to free access to specialists in Ontario, Canada, the government has restricted this access.<sup>[49]</sup>

The WHO Expert Committee attributes the reasons for the inefficiency of referral systems to the following factors: the overwhelming workload of health workers, long distances and the problem of patients' transportation, lack of trust in health care at low levels of service delivery, inadequate amount of information sent from referral sources to hospitals and *vice versa*, lack of a well-designed and efficient referral system, inadequate management and commitment, inadequate education and lack of guidance on referral criteria at different levels of providing health care services, and the lack of support services of health-care centers provided by hospitals.

In countries that have been more successful in the FPP, referral system policies are well implemented. In the UK and Canada, the national health system is based on the stratification of health services, referral system, and family physician.<sup>[28,65]</sup>

One of the most important factors in the success of any health policies is the appropriate information and communication infrastructure between the various level of providing care, and the implementation of EHRs will increase accountability and transparency in the health system and provide strong support for referral system.<sup>[66]</sup>

The countries surveyed had adequate information systems to achieve health goals. These systems collect the data needed for the financial and reimbursement processes, as well as for evaluating and monitoring the achievement of goals.<sup>[28,32]</sup> In these countries, the use of EHRs is one of the important principles in PHC and has increased the accountability and transparency in the health system. According to the results of various studies, the use of EHR supports clinical decisions that enhance the quality, safety, and efficacy of patient care, and the access of the care provider to complete patient health information leads to the prevention of many errors and adverse events.<sup>[67]</sup> According to a study conducted in 2013 among 14 developed countries, the rate of primary care physicians using e-health protocols for patients was assessed. The results showed that the highest rate was in the UK with 97% and the lowest in Canada with 56%.<sup>[68]</sup>

Based on surveys from selected countries, in the health information system, transparent and defined relationship should be established between the different health service providers, and the access of different providers to patient information should be defined and classified. Also, confidentiality of patient information is maintained.<sup>[69]</sup>

According to the WHO, health financing systems are essential to achieve universal health coverage, and the choice of each of the different methods of financing will apply different effects on the realization of social justice and the efficiency of the health system.<sup>[70]</sup>

A comparative study found that health expenditures in the selected countries were largely funded by the government and from general taxes.<sup>[28,46]</sup>

The findings of the Wagstaf study suggest that tax-based methods are progressive, while social insurances are regressive; private insurances are more regressive; and paying OOP is the most regressive method of financing. Therefore, it is better to have a more government-funded and less private-funded health-care system in FPP implementation.<sup>[71]</sup>

Compared to 1970, in 2008, the public (federal, state, and local) share of total national health expenditures increased nearly 10 percentage points, from 37.5 to 47.3. Currently, about half of each health-care dollar in the US was paid for by the government – a figure that would probably surprise those who think of the system as largely a private one.<sup>[14]</sup>

Therefore, based on the available evidence, there is a strong need to review health financing policies in countries. In developing and low-income countries, it is suggested that the government's share of health-care spending be increased in order to increase equity in access to health care.<sup>[72]</sup>

Payment methods for care providers are the most important mechanisms of cost control, quality and service management in the health system. Each method creates a different set of motivations and may be appropriate in different contexts. No method alone is the best method and a combination of payment methods is more appropriate for one country over time.<sup>[73]</sup>

Traditional payment methods are therefore no longer acceptable and require reforms to improve the quality of health services and prioritize coverage. Most selected countries have used a combination of different methods to increase the efficiency and effectiveness of the payment system and improve the expected results.<sup>[74]</sup>

In countries such as the United Kingdom and Turkey where registration with a compulsory family physician or family physician has a role as a gatekeeping, the method of payment per capita is generally used alongside other methods.<sup>[28,46]</sup>

Systematic review studies indicate that P4P has a positive effect on system performance, but the impact

of these programs on health outcomes has not yet been clarified.<sup>[75]</sup> Studies in Portugal show that after primary care reform and the introduction of the P4P program, the quality of care and satisfaction of service providers and recipients has improved.<sup>[76]</sup>

According to a 2008 study, there are many differences between OECD countries in terms of payments to GPs and specialist physicians. According to the study, the rate of increase in specialist income over the past decade has been higher than GPs. This gap of income has increased the number of specialists and raised concerns about GP shortages.<sup>[77]</sup> Therefore, since the payment system to providers is influenced by other financing operations, including resource allocation and strategic purchasing of services, the combination of different payment methods should therefore be in line with national financing strategies.<sup>[76]</sup>

The conflict of interest caused by the implementation of the Family Physician Program between specialist physicians and GPs can affect their professional behavior. Implementing the family physician plan and referral system may reduce the patients of specialist physicians and their income. Based on a study among OECD countries in 2008, the researchers believe that the specialist physicians earn less than GPs in countries where GPs have surveillance roles.<sup>[77]</sup> This may be the reason why family practitioners have the highest income in the Netherlands and England.<sup>[78]</sup> Therefore, one can say that in countries such as the US and Iran where there is a large income gap between family physicians and specialist, the likelihood of conflict of interest and the resulting problems will be exacerbated by implementing the family physician program with the gatekeeper role and the compulsory referral system.<sup>[14,79]</sup> In countries such as the United Kingdom, conflict of interest has been managed in different ways such as reforming the payment system and launching of a transparent information system<sup>[28]</sup>

Thus, based on what is inferred from this study, strengthening the control tools of the authorities in charge, laws and regulations, financing, payment, and behavior can have a significant synergistic effect on successful policy implementation.<sup>[21]</sup> In this regard, since the family physician and referral system program benefits from most of the above levers in organizing and reforming the health system, it can be considered as the best option to reform the health system.<sup>[58]</sup>

Finally, the results of this study showed that the FPP differs from country to country. Gibson also describes a key feature of the FPP as adaptability to its executive environment.<sup>[80]</sup> Therefore, in enhancing and improving the family medicine program, cultural, national, and



regional characteristics must be taken into account to improve the performance of the health system.

## Conclusions

Development of the FPP is a main step to achieve health system goals. Success in such programs depends on situational, structural, cultural, and international factors. Different countries use different policies to implement a FPP. The results of this study showed that proper policymaking of health system and provision of infrastructure have an impact on success of FPP. In policy making, the most important issue is the health system governance, which can play an important role in policymaking of the family physician. Provider–purchaser separation can lead to success and reducing conflicts of interest in health system countries. Regulation and implementation of the monitoring and evaluation system has helped create opportunities for family physician policy review, performance improvement, resource management and budget allocation that should be considered as a model for continuity of FPP in developing countries.

Financing and proper payment systems are key factors for the success of health policy in countries. The study emphasizes that in countries moving toward tax-based financing and social insurance, more sustainable funding has been provided to implement health plans and reduce OOP payments and achieving UHC. Also, government support by involving the private sector in providing primary care can produce better results in implementing a FPP. Establishing a health insurance structure and reforming the payment system and moving towards a blended and performance-based payment system ensuring that FPP implementation, physicians' satisfaction and reduce induced demand and reduce costs.

## Acknowledgments

This study was part of a PhD thesis supported by the School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran (IUMS/SHMIS\_97\_4\_37\_13765).

## Financial support and sponsorship

Iran University of Medical Sciences (IUMS), Grant/Award Number: IUMS/SHMIS\_1397/9421557006.

## Conflicts of interest

There are no conflicts of interest.

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