Original Article

Infrastructures Required for the Expansion of Family Physician Program to Urban Settings in Iran

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Abstract

Introduction: Following the implementation of Family Physician (FP) Program in rural areas and cities with populations under 20000 in 2005, the Iranian Ministry of Health and Medical Education in 2012 decided to implement urban FP in large cities with populations more than 20000. Along with the development and implementation of urban FP in Iran, local websites and newspapers reflected the viewpoints of experts in various levels of health system regarding the various stages of Family Medicine (FM) development (from agenda setting to initial stages of implementation). This study aimed to explore the major infrastructures perceived to be required to achieve desirable implementation of urban FP through analyzing experts' viewpoints reflected in the media and interviews.

Methods: In a qualitative study, we analyzed the contents of health related national websites as well as transcribed interviews with key informants. Documents were collected from December 2011 to January 2014 and interviews were conducted from February 2014 to June 2015. We used mixed thematic approach (inductive and deductive) for analysis that was assisted by MAXQDA 12 software.

Results: Infrastructures needed for the implementation of FP were categorized in five main themes and 23 subthemes. The themes are: 'Stewardship/governance', 'Actors and stakeholders', 'structural infrastructure', 'technical infrastructure and needed resources', and 'information and communication infrastructure'.

Conclusions: Expansion of FP program to urban settings needs appropriate attention to the principles of policy implementation as well as provision of robust infrastructures. Well-defined stewardship, revised approach to financial regulation and payment system, stakeholder's commitment to collaboration, policy for conflict resolution, and universal insurance coverage are pivotal for the expansion of family physician program to the urban settings in Iran.

Keywords: Family physician, family practice, health system, infrastructure, policy implementation, urban areas

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Introduction

Development of referral system based on Family Physician (FP) Program is a principal key for health policy makers and planners to achieve the goals of any health system.[1,2] The experience from other countries shows that FP program includes a wide range of policies and decisions for organizing the health care services.[2] Like other policies, exploring the most important infrastructures and providing the needed requirements are key factors for successful implementation of family physician policy.[3]

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Iran's Health system, FP policy becomes agenda and the reflection of Media

Iran's health system has been witnessing considerable improvement in the course of past decades. Extensive maternity and antenatal care coverage has led to a significant decrease in maternal mortality rate (MMR) from 37.4 (54.5 in rural area and 55.2 in urban area) in 1996,[4] to 20.3 in 100,000 live births in 2013, as well as an increase in life expectancy from 56 years in 1979 to an average of 75.5 years (mean over 14 years) in 2016 which are among improved outcomes in Iran's Health system (Figure 1 shows life expectancy trend in Iran 1960 – 2016).[5]

Establishing the position of health within legislation and upstream documents from the constitution to national development programs with a focus on developing primary healthcare (PHC) network between 1982 and 1987, rationalizing health services in all provinces and prioritizing deprived and rural areas, transformed Iran's public health and promoted the country as a successful world-class model for PHC.[6–8]

Evidence shows that Iran's PHC acted as a platform and a critical infrastructure for implementation of rural family physician and facilitated its implementation.[3]

The 4th, 5th and 6th Economic, Social and Cultural Development Plans of Iran endorsed the implementation of referral system and FP as essential steps for the Iranian health system.[9] Many

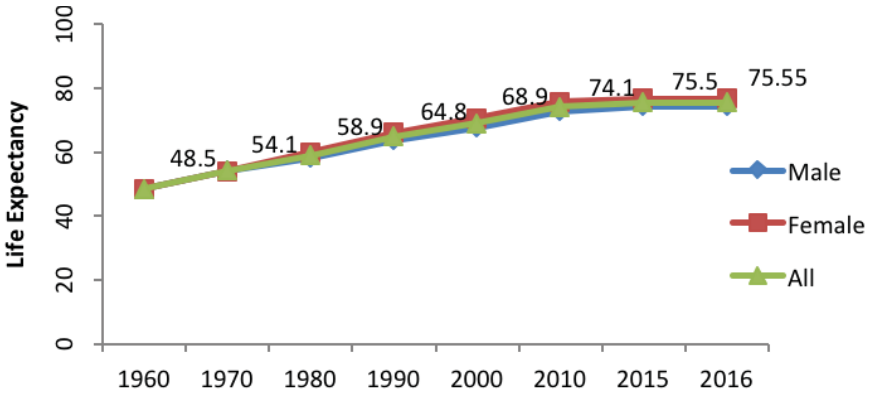

Figure 1. Trend of Life Expectancy in Iran (1960 – 2013) [Iran's Ministry of Health and Medical Education, 2016]

policy makers believed that the optimal and comprehensive implementation of FP policy may have a considerable role in public health promotion, social equity development and establishing a universal health care system.[9] FP and referral system were included in the 5th development plan of Iran in 2004. In 2005, Medical Services Insurance Organization (MSIO) was obliged to issue provision of health insurance for all residents in rural areas and cities with populations under 20000 (universal health insurance for rural areas).[10] In this year, the Iranian ministry of health and medical education (MoHME) took advantage of this opportunity to develop and implement FP and referral system, which increased rural population's access to physicians and other services. In 2011, six years after the launch of rural FP, the MoHME decided to expand FP policy to the urban settings. An agreement was signed between the MoHME and Ministry of Cooperatives, Labor and Social Welfare (MoCLSW) to implement FP in cities with populations of 20,000 to 50,000 across the country. In the first step, three provinces (Sistan and Baluchestan, Chaharmahal and Bakhtiari and Khozestan) were selected for implementation of the program as pilot. Finally, the program was supposed to be extended to all of the country in 2012.

The start of FP implementation across the cities triggered considerable media attention, in particular among local health related electronic databases. Ever since FP began its implementation, a considerable volume of news and reports containing concerns, views and opinions of Iranian health scholars and experts were posted on the internet. However, FP stopped only 4 months after its implementation when the minister of health and medical education changed. This study aimed to explore the infrastructures required for the implementation of FP, without which viable implementation of the program was put in jeopardy. This study is the first one of its type that used deep web document analysis and interviews regarding FP policy in Iran.

Methods

Study Design

This is a qualitative study that used four main data sources: literature, national documents, local websites, and face to face (12) and telephone (4) interviews. The research team included academics and health experts working in various parts of the health system.

The media is often a key factor to understanding what is going on in any health system. Media analysis, e.g. newspapers, plays a certain role in understanding the implementation of the policies and programs,[11] particularly for examining the ways through which the perceptions of various stakeholders are created, shaped or strengthened.[12] Recently, gathering data through particular electronic databases has been recognized as a robust step to shed light on multiple dimensions of a special issue.

In this study, we collected relevant web documents about FP implementation in cities of Iran from December 2011 to January 2014, when FP was announced, which resulted in a contentious debate. As a supplementary data source, we conducted interviews from February 2014 until June 2015.

Sampling

We selected several relevant and appropriate websites in consultation with some national health experts. The criteria for selecting the websites included: national websites well-known in health policy issues, websites of institutes that were involved in FP program and web portals of three eminent universities active in publishing update news in the country. The document analysis worksheets were designed and developed by the research team (Appendix 1). We purposefully selected comprehensive and appropriate news from national databases, using a researcher-made form (including the ID code, name and position of the interviewee, date and headline of the news, source's name, and insertion time of news). In addition, we collected reports, laws, administrative/executive regulations, payment procedures, guidelines, reviews, policy statements, minutes of meetings and documents related to round table discussions from organizations i.e. MoHME, Parliament, the Medical Council and some health insurance firms. To seek out research participants who could cover comprehensive perspectives, a purposive and snowball (chain-referral) sampling was used for selecting interviewees. We conducted 19 interviews. The participants were policy makers and policy analyzers in various national and regional levels of health system, from organizations including MoHME, Health insurance organizations, particularly those with experiences in Family Medicine (FM) program development and implementation, health professionals and other stakeholders who influenced various processes (agenda setting, formulation, implementation and evaluation) of FM program. Table 1 shows the numbers and positions of the participants.

Table 1. Interviewees characteristics

	Ministry of Health and Medical Organization	Health Insurance Organizations	Management and Planning Organization of Iran	Iran Medical Council	Medical Universities	Health Research Centers
Position	Former and current deputies, senior officials, senior national finance official	Senior officials, current and former head, national insurance policy maker	Senior deputies and officials	Executive manager	Senior deputies and professors	Head of the center and research professors
Education						
MS	1	1	- - -	- - -	- - -	- - -
General	1	1	- - -	1	-	-
Specialist	1	- - -	- - -	1	1	1
PhD	2	2	2	- - -	1	2
Gender						
Male	4	2	1	2	2	2
Female	1	2	1	-	- - -	1
Total	**5**	**4**	**2**	**2**	**3**	**3**

Data collection

We selected indexed documents, posted on the chosen websites that were directly or indirectly related to the FP program by consensus among the researchers. Urban FP was a hot issue at the time of study, accounting for a large amount of debates on the media and national websites and a large volume of data for our research eventually. After removing the duplicates, we gathered 828 documents (Appendix 2). To determine their frequency, we classified the documents collected from the websites on the basis of their type (paper, newspapers, reviews, news, letters and reports, etc.).

To achieve the research objectives and considering interview schedule, limitations of cost and time and importantly reaching to the data saturation the number of interviewees were finalized. The interviews continued until no new information was obtained. Each interview lasted between 1 – 1.5 hours. In the beginning of the interview, the objectives of the study were explained and verbal consent of the interviewee was obtained. The venue was approximately a comfortable room at the work place of interviewees. A discussion guide composed of in-depth and semi-structured questions was used, ensuring the aims of the research study were met and allowing key informants to express views and experiences in their own language. All interviews were audio recorded and transcribed verbatim by the researcher. Data were collected, transcribed and then analyzed from February 2014 until June 2015.

Data Analysis and validity of data

Documents and transcribed interviews were analyzed through thematic analysis approach (inductive-deductive) assisted by MAXQDA-12. Studies show that thematic analysis is an appropriate approach for analyzing the policy-oriented documents and provides a purely qualitative, detailed and nuanced account of data.[13,14] Thematic analysis includes using the scientific methods for identifying, analyzing and reporting themes within data.[15] Through this method, we managed to identify internal relations between the content concepts or relationship between other different concepts.[16,17] For analyzing, firstly, the transcripts were read at least twice to familiarize with the data. Then, initial codes were generated to form explicit and interpretive meanings of the data.[18] The codes were then organized and grouped as semantic and latent themes through a recursive process of reviewing the qualitative data at a conceptual level.[19] Themes were defined and named and at the final stage the report was produced.

We ensured the validity of study in two ways. First, different data sources were used, including documents, literature, media news, and interviews, which allowed data triangulation.[20] Second, codes and themes were developed and reviewed by all members of the research team to control the probable bias.

Findings

Our content analysis identified five themes and 23 subthemes (Table 2). A total of 2327 codes were extracted from analyzing all documents and transcribed interviews.

The majority of collected documents were related to the 'first phase' of urban FP program, when the MoHME decided to implement urban FP in selected cities in Iran. The 'second phase' covered the first steps of universal implementation of FP in all provinces across the country, while the third phase was about the early failure of the program that resulted in stopping the implementation of urban FP, hence media attention came down gradually.

There was consensus that policy makers did not pay enough attention to the required infrastructures for planning and launching urban FP program, especially for formulating FP instruction named '02 version'.

Most stakeholders emphasized the necessity of attention to the FP program infrastructures before its implementation, *"infrastructure is not just an attractive term to use sometimes to beatify our statements… considering infrastructures are very vital for succession in any program and major projects. It is also necessary to make required alterations in the infrastructures to make them fit for the given program… sudden collapse of program at any time by the tiniest pressure is possible if infrastructures are not prepared enough…" (*Doc81/ Former Deputy Minister of Health).

Table2. Themes and sub themes related to the infrastructures required for implementing urban FP program In Iran

Themes	Sub themes
Stewardship/governance	• The role and position of the MoHME • The necessity of united health stewardship in the country • Close interaction between main actors of health system
Structural infrastructure	• Administrative capacity of the health insurance organizations • Financing regulation and payment system • Insurance coverage of the population • legal responsibility to purchase services in the country • Change in insurance structures (insurance integration) • Alignment with rural FP program • Legal ambiguities of FP program
Policy actors and stakeholders	• Stakeholders commitment to collaboration • Participation and interaction between stakeholders • Intra/ Intersectional cooperation and coordination of stakeholders • The role and influence of the media • Capacity and position of the non-governmental sector • The supporting individuals, groups and organizations
Technical infrastructure	• Human resources • Financial resources • Physical resources • Scientific and educational resources
Information and communication infrastructure	• Connection of different levels of health service delivery • Establishing referral system • Use of information mechanisms

Stewardship/governance

Most documents declared the MoHME as the main actor in FP program implementation, whose core responsibility was crucial in coordinating other key relevant stakeholders, i.e. health insurance organizations as well as specialist physicians in public and private settings in order to accelerate the implementation of FP program as a national plan. Nevertheless, some experts pointed out that the stewardship function of the MoHME had been dispersed with its inadequate authority to implement FP program,

"*Fragmentation and multiple entities with conflicting interests involving in stewardship can be mentioned as another obstacle facing establishment of FP program in Iran. For example, a person with a supportive viewpoint (regarding the FM program) in Ministry of Health [and Medical Education] changes his mind completely and opposes it when he/she gets a new high position in a health insurance scheme!! That person not only tries to put an end to FM implementation but also runs a new program parallel to FM program (referring to so-called the Honest (in Farsi AMIN) Physician Program in Social Security Organization). Therefore, if stewardship were centralized in Health Ministry, we would have fewer challenges in running FM in Iran.*" [Doc 102/Consultant of the Minister of Health]

Many participants declared that it should be emphasized that the function of stewardship defined as setting the strategic direction for the all different actors involved in the health system and oversight of entire system was not a matter of organizational fragmentation or integration among health insurance schemes or between ministries of MoHME and MoCLSW. But experience from the context of Iran indicates that institutional fragmentation both at ministries' levels and health insurance schemes has led to fragmentation in stewardship function of the whole health system.

In contrast, one expert emphasized implementing the FP by the fund holder organization,

"*Usually, family physician is implemented by the organization that manages the funds. In Iran, insurance organizations should desire to implement this program, not just the Ministry of Health [and Medical Education]*" (National senior policy maker).

Structural infrastructure

As an important structural infrastructure, performance and executive capability of health insurance schemes are very important for the implementation of FP. Some experts believed that the current health insurance system was not ready to embrace a great health system reform such as FP. They stated that compliance of health insurance schemes with FP and principles of referral system can support FP program to achieve its expected goals. Unsatisfactory health insurance schemes in the past, long term liabilities of health schemes to the health care providers, lack of un-time reimbursements by health insurance schemes to the family physicians, and not fulfilling their obligations regarding FP were considered as challenging obstacles for effective implementation of FP in Iranian cities,

"*It is believed that for doing great works, we should think beyond the territory of the Ministry of health (consider all relevant organizations, entities and relations) and look at the issues from outside. As long as we confine ourselves within the boundaries of Ministry of Health, we are satisfied with small reforms (in health system)*". (Doc201/ National Policy Maker)

Lack of fund pooling and fragmented health insurance system created additional challenges for FP program. According to many participants, merging social health insurance funds and creating Iran Health Insurance Organization as the proposed single fund was perceived to be one of the contributing prerequisites for the FP program,

"…for delivering some health services in the secondary and tertiary levels of health system, health insurance schemes like those offered by banks, private insurance companies, the Tehran Municipality, insurance for some specialized diseases and so on should act coordinately and in the same way. Providing the same benefit package for all insured groups and avoiding health financial resources from being wasted are the main results of creating single Iran Health Insurance Organization… successful implementation of FP program depends on creating of this organization..." (Doc63/ A senior national finance official)

Setting medical tariffs rationally and based on relative value of health services was among other needed infrastructures, which deemed necessary for effective implementation of FP program. Experts from Ministry of Health and health care providers have repeatedly shown their discontent with current medical tariffs. They believe medical tariffs have remained low superficially in spite of constant increase in general inflation,

"…Medical tariffs must be based on reality. For example, a 20 % increase in medical tariffs cannot cover the increase in medical expenditures. If you compare current medical equipment prices with the corresponding prices in the last year, it is clear that the rate of increase in medical prices is much higher than 20 %..." (Doc 666/ National insurance policy maker)

Policy actors and stakeholders

Power, position (supporters or opponents) and expectations of actors and stakeholders can profoundly influence the fate of the program. Experts believed that close relationship between the two ministries (*MoHME and MoCLSW)*, political will and support from the government and Islamic Parliament will remove existing challenges and facilitates the extension of family physician to the cities.

Necessity of private sector participation as one of the stakeholders of family physician policy has been emphasized by many experts in the health system. In contrast to rural FP program which was implemented based on vast governmental primary health network in rural areas, urban FP policy needs close collaboration of private health sector which is more active and dominant in cities.

"…. The important point is that still there is no clear policy about association of private sector within health system, and also the approach of family physician plan regarding private sector has not been defined…" (Doc 99/Deputy Head of health)

Mass media were quoted in many documents as the main instrument to inform people about FP program as well as facilitating its implementation. Mass media play a determining role in showing and introducing the advantages of FP program to the society and in this way may shape people's understanding in a way to make them more supportive of FP:

*"I consider you (media) as the consultant of FP program as a national and completely social program. You are the eyes and ears of the public. I want you to help the health system to implement this program. Reporters should not be the representative of those who are in conflict with the FP program, because this program is a national plan…" (*Doc 9/National policy maker)

*Another powerful actor is the Management and Planning Organization of Iran (MPO), formerly known as the Plan and Budget Organization (PBO). It is one of the largest governmental establishments in Iran, fully responsible for preparing the country's budget. As the main body responsible for preparing the annual budget it has an influential role in implementing FP program by providing the required financial resources for FP implementation under the MoHME budget. (*A senior national finance official).

Regarding the role of policy actors and other stakeholders, some experts believe that family physician program should turn into government dialogue and become first speak in the country. In this way, many problems can be solved. They also mentioned that frequent turnover of ministers and differences in their perspectives and awareness are among reasons for failure of this program.

Although some experts mentioned that the views of different related groups and stakeholders were adopted for designing and developing the FP program, some other experts believed that the perspectives of the majority of medical and paramedical professionals have not been adopted. For example, the Islamic Republic of Iran Medical Council (IRIMC) as a Non-Governmental Organization (NGO) represents 241,406 members including 89,308 general practitioners and 42,333 specialist and sub-specialists in medicine. One of its main responsibilities is to protect the professional rights of physicians. Both general practitioners and specialists and IRIMC can support or resist the FP program as it can influence their interests directly.

"Success of this program in the first level (of health system) is subject to participation of general practitioners. However, general practitioners and other relevant medical professionals claim that this program has made a challenging decision about their great guild/association without listening to their voice…" (Doc 86/ National union manager and doctor)

Technical infrastructure and needed resources

Technical infrastructures and resources required for running family physician were divided into four categories including human resources, financial resources, physical resources and educational and scientific resources.

Human resources, general practitioners (GPs) in particular, are referred to as the critical requirement for FP program implementation. A great portion of documents, emphasizing the role and importance of general practitioners' position, identified GPs as the central component of health system.

According to some websites, different groups of clinical professionals should have been included in urban family physician team. Despite claiming the availability of adequate human resources for running the FP program, some experts believed that FP policy suffered from lack of human resources as the current numbers of GPs were much smaller than what is required for desirable implementation of FP program:

"With the existing shortage of family physicians in most parts of the country, it is unlikely to ensure its successful implementation, in particular where the Ministry of Health [and Medical Education] is going to make use of private providers' capacity (physicians working in private clinics) to run FP plan" [Health policy researcher].

Providing sustainable financial resources has been mentioned by many experts as the main facilitator for starting and maintaining FP program in the long run. Uncertainty about the sustainability of financial resources for continuous implementing of FP has been a source of great concern among decision makers. While many officials acknowledged the availability of adequate funds to launch FP at the beginning of the program, many incriminated the lack of allocating required funds to support FP as the key reason for failure of FP implementation. Lack of adequate financial resources, underestimation about required funds for the plan,

not allocating the committed financial support by responsible institutions, e.g. from targeted subsidies, and lack of clear, earmarked and stable financial resources for FP implementation were among the reasons that were reported to have hampered FP to achieve its expected goals:

"*…Shared management of family physician budget between two ministries (MOHME and MOCLSW) reminds us of the bitter experience of reimbursements to the rural family physician plan. By the way, a part of family physician budget comes from not very stable sources, which would lead to conditional implementation of this program in practice. …*" (Doc 107/ National health policy analyzer)

"*Incomplete implementation of the second phase of targeted subsidies with limited financial resources and insufficient responsibility has jeopardized the implementation of a big policy as FP*". [A senior health official]

A good example of required physical infrastructure for FP implementation in Iran is hardware platform and the internet speed for the use of electronic health records (EHR) for facilitating the exchange of information among various levels of health care delivery system:

"*…the connection and partnership of pharmacy, laboratory, diagnostic and Para clinical services have not been correctly specified within this program. Information and communication systems of the FP program are not yet complete. Electronic health records should be created and filled for all people simultaneously…*"[Doc 313/A manager in Treatment Deputy]

Scientific and educational aspects are also critical for successful implementation of FP policy. Illustrating the concept of family physician for the people to understand, giving accurate and comprehensive information about the benefits and features of FP to the public, making essential corrections and modifications in the medical curriculums for the medicine students to prepare them for fulfillment of the expected activities of FP were mentioned as educational prerequisites for smooth implementation of FP.

"*… new educational materials should be taught to the general practitioners (medical students) and the main purpose of general practitioners' educational program should be for family medicine. Logically, fundamental changes should be applied in general practitioners' curriculum…it can be short courses (two or four months) or long courses (2 years) during the study or after finishing Medical education*" [Doc 79/ Educational Assistant in MoHME)

Information and communication infrastructure

Availability and building applicable communicational infrastructures among the three levels of the health delivery system is necessary to ensure easy flow of patients through the referral system. Establishing a well working referral system and completing communicational links between primary, secondary and tertiary levels of health delivery system in all cities and provinces were other prerequisites of FP implementation:

"*To deliver comprehensive health services in urban FP, the health system should provide all kinds of health services including preventive, curative and rehabilitative services… actually, a referral system aims to meet this purpose…" (A former senior health policy-maker)*

Many reports referred to the referral system as the first step to launch FP program, emphasizing that without referral system, there is no way to implement FP: "*The starting point of referral system is family physician … these two programs should be done simultaneously. The universities of medical sciences would get permission to implement FP for their population within their catchment area; only provided they have devised the referral system… they should devise how the population within their catchment area would be referred to upper levels of health system like hospitals…" (A Health policy maker).*

"…one problem for general practitioners as the first line of health services delivery in FP program is the lack of a clear pathway for referring a rural patient to the upper levels of health services, which entails removing all existing shortcomings and establishing a complete referral system …" [A national manager and Family Doctor]

Discussion

The necessity of developing a referral system and family physician program in all cities across the country is the most important dimension of Iran's upstream health policies. Optimal and comprehensive implementation of such a policy was perceived to have considerable impact on public health promotion and social equity development towards establishing a people-centered health care system. Although legally obliged by the fourth and fifth national development plans of Iran and other upstream policies, the implementation of urban FP and referral system has not materialized meaningfully after 19 years of its initiation.

Five years after the pilot implementation of urban FP in three provinces in Iran, this study reports the comprehensive documents and interviews analysis of FP program implementation in Iran. As such, our paper underpins the required infrastructures as the cornerstone for development and implementation of urban FP in Iran.

Leichter (1979) indicated that contextual factors including situational, structural, cultural and international or exogenous factors may affect policy implementation.[21] These factors are complex and unique, both in terms of time and settings. To understand how policies change, accomplish or not, the context in which the programs or policies are made, and the extent by which such factors may influence the policy outcomes must be assessed and analyzed.[22]

Shiffman and colleagues (2002) emphasized the effects of context on policy.[23] Although FP implementation was endorsed by the 4th and 5th national development plans of Iran, not providing infrastructures and other facilitating factors as well as failure to align such factors with each other led to the failure of the program.

Our analysis indicates that universal urban health insurance was a pivotal step for implementation of urban family physician in Iran. We found that scattered stewardship and governance of Iran's health system also affected FP implementation. Shared stewardship of family physician between the two ministries of MoHME as the main policy maker for FP, and MoCLSW as the financier of the program, as well as lack of cooperation between them posed further obstacles to FP.[24,25] In fact, the MoHME did not have sufficient authority to steer the implementation of FP in Iran.

Our findings showed that rash and hasty implementation of national FP policy, due to constant changes in main policy makers as a result of governmental change, compromised desirable attention to the provision of the required infrastructures for suitable FP implementation in Iran.

Weak communications and lack of active coordination between different parts of government (e.g. the MoHME and the MoCLSW as the main actors of FP policy) and also poor interaction among different levels (national, regional and local) of policy makers and implementers also hindered the policy execution. As a successful strategy for accelerating the implementation of FP, promoting 'outcomes-focused' approach was not employed as a way to encourage better coordination of the actions and plans among different ministries, organizations and agencies such as public and private hospitals, i.e. the Iranian Medical Association.

Studies indicate that lack of collaboration between policy making body (top level) and implementers (subordinate level) is the major feature of centralized administrative systems.[26] Most policies using top-down approach cannot be fully implemented in practice.[27] Developing communicational infrastructures between different levels of health delivery system, from the primary to tertiary level, is a critical factor for developing and extending FP program to the whole country and a communicational link to achieve the expected goals. Lack of clear communicational links between different levels or patient flow through the referral system affected FP implementation adversely.

Opposing political positions against FP also hindered its implementation. Close collaboration among all concerned political authorities was essential during all phases of FP program. Engaging interest groups in policy formulation process can help them to realize themselves as a part of program, which in turn may increase the possibility of more successful implementation.[28] Appropriate political atmosphere, understanding all political authorities and analyzing their position in power structure can help policy makers to devise appropriate strategies in a way to increase success of any program.[29] Indeed, all stages of policy making from problem recognition to agenda setting, policy formulation, policy implementation and evaluation are strongly impressed by political context.[30,31]

One possible strategy to facilitate the implementation of any policy is to invite interest political groups to participate in different stages of policy making.[32] It is advisable to use actors' ideas, experiences, and opinions, especially general practitioners, public, health members in the policy process of family program.[24,33] FP planning and implementation would have benefitted from stakeholders' engagement in setting objectives and formulating the policy. Undermining governmental administrative capacity along with the absence of the necessary infrastructure might lead to a particular policy be impossible to implement, regardless of how legitimate it is seen to be.[31]

FP implementation was challenged as a result of health insurance schemes; this was related to lack of mutual cooperation between the health insurance organizations and urban FP implementers in Iran. As the main financier of FP program, close collaboration of health insurance organizations to reimburse the service providers on time, was crucial to facilitate FP implementation, fragmentation in health insurance system challenged urban FP program performance even further. Several health insurance schemes were used for various groups of population with different approaches to resource collection, fund pooling, purchasing health services, benefit packages, the use of private or public providers, and setting medical tariffs to reimburse providers' services, among others.

As two essential structural reforms required for FP, the Supreme Council for Health Insurance in Iran could not determine rational tariffs for health and medical services as well as the existing basic insurance schemes were not merged with each other.

Our interviewees identified the alliance of these organizations as the main infrastructure required to accelerate the implementation of FP in urban settings. Unfortunately, the insurance funds pooling has not been achieved thus far; in fact, the Armed Forces Medical Insurance Organization has been legally exempted from merging amid security concerns.

In addition, lack of a unified benefit package among health insurance schemes, various co-payment rates for different groups of insured populations, fragmentation in health care facilities, insurance overlap, unreliable population coverage statistics, plus about 10 percent of population with no insurance coverage[34] were some problems resulting from fragmented health insurance system, which harmed FP implementation even further. Hence, universal implementation of urban FP through various health insurance schemes will not be an easy mission to accomplish.

Challenges and strengths of the study

Validity and the quality of information entered into the electronic databases and published in the media were the main challenge.

As FP policy was at the heart of debate at the time of study, it was covered by the media substantially. Content analysis of the gathered documents and the use of other data source i.e. interviews covered the most important infrastructures required for FP program and largely filled the probability of information gaps.

In conclusion, as a fundamental and comprehensive reform, FP program is considered as an appropriate solution to many challenges existing in the health system. Nevertheless, the implementation of urban FP program is broader and much more complicated in comparison with rural FP in Iran. Given the required infrastructures described in this study, the execution of urban FP across Iran needs more precise and comprehensive planning and preparation. Successful FP development entails precise FP policy formulation and implementation, drawing upon lessons learned from past experiences, especially in the area of urban FP program, and taking into account the viewpoints of all actors, stakeholders and political powers who can contribute to monitoring and evaluation of all stages of this policy. Rather than attempting to implement FP nationwide within a short period of time, efforts should be focused on provision of the executive infrastructures and establishment of an efficient referral system for public health promotion.

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Appendix Table 1. Worksheet for collecting documents data

N	ID Code	Name of the interviewee	Position of the interviewee	Source's Name (Name of local website	Headline of the News	Date of the news	Insertion time of News
1	P_1						
2	P_2						
3	P_3						

Apendix Table 2. Name of local databases and Number of collected documents

N	Name of local Databases	Number of collected documents
1	Salamatnewes (http://www.salamatnews.com)	191
2	Sepid (http://sepidonline.ir)	78
3	Iran Majlis (http://www.majlis.ir)	4
4	Iran's Medical Council (http://irimc.org)	38
5	Islamic Republic News Agency (http://www.irna.ir)	51
6	Tabyannews	47
7	Webda (Minstry of Health and Medical Education news database) (http://webda.behdasht.gov.ir)	304
8	Tehran University of Medical Sciences (http://sbmu.ac.ir)	78
9	Government news database (http://dolat.ir)	0
10	Shahid Beheshti University of Medical Sciences (http://sbmu.ac.ir/)	37
Total		**828**

Appendix Table 3. Interview guide

Date and venue	
Name and position of interviewee	
1	What is your general perception of the urban family physician (approved 2012) in Iran?
2	What is your opinion about development and implementation of the rural family physician policy in Iran?
3	To what extent do you think the policy was properly formulated and implemented?
4	Which educational and financial policies were adopted in accordance with the policy?
5	Please, explain the strengths and weaknesses of the policy. Which aspects of the policy need to be changed or improved?
6	Considering the fact that near two decades have passed since the proposing the policy, why this policy has not been implemented appropriately in cities?
7	Would you please, give your opinion about, why the policy implementation was not successful?
8	From your point of view, what are required infrastructures and needed resources to implement rural FM policy in Iran?
9	As a final question, is there any further issue you would like to add?