

## Future Trends of the Primary Healthcare System in Iran: A Qualitative Study

### Abstract

**Background:** Primary healthcare system in Iran has played an extensive role in promoting people health in the past decades. However, regarding universal developments in the different global aspects effective on health, the performance of this system has been influenced significantly. The aim of the present research is to identify the future trends of the primary health care in Iran. **Methods:** The participants of this qualitative case study were experts in primary healthcare, which were selected and interviewed through purposive sampling method. The interview process was saturated after 25 interviews, so we stopped the process at this point. Framework analysis based on STEEP model used to analysis the interviews. **Results:** The most important social/value, technological, economic, environmental, and political future trends of primary healthcare in Iran included demographic transition, epidemiological transition, social and cultural changes, emergence of modern and advanced technologies, internet and cyberspace, budgeting limitations, resource management, changing paradigm from volume to value in providing health services, environmental pollutions, natural disasters, health governance, intellectual paradigm of senior officials, regional security, international development, and other internal factors of the health system. **Conclusions:** The identified factors can be turned into opportunities for Iran primary healthcare system if health planners and policymakers have a deep and accurate look at these influential factors and manage them properly.

**Keywords:** Forecasting, Iran, primary healthcare

### Introduction

One of the significant developments occurred in the field of healthcare delivery is the decision of the international community in accepting primary healthcare (PHC) to achieve multiple goals, including the realization of equity in terms of community access to PHC services. This decision has played a significant role in the reforms of the health system at local, national, and international levels.<sup>[1]</sup>

The PHC system in Iran has been established since 1984 in a healthcare networks format in different cities; family physicians were also employed in this system since 2005 to develop healthcare service delivery, increase access and productivity of healthcare, and also decrease inequities in the rural areas and poorer cities. Currently, the program of Urban Family Physician is in operation in two provinces of Fars and Mazandaran in Iran. The final purpose of this program is

to develop the Family Physician Program in all the urban areas of Iran.<sup>[2]</sup>

According to the structure of the PHC system in Iran, each village has facilities named health house, staffed by trained healthcare workers named Behvarz who provide healthcare to 1200 residents. These centers work as the frontline of health system in providing primary services. In main villages, moreover health houses, comprehensive health services centers are active, which provide one higher level specialized services by a family physician and about 10 health workers to 7000 residents. Facilities named health posts and comprehensive health services centers provide services in cities which are similar to services provided in the main villages. Centers comprised of all above facilities named as city health network supervise on the mentioned centers. This network itself is under the management and leadership of universities of medical sciences and is managed by district health centers which are under the supervision of medical science universities.<sup>[3]</sup>

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Iran PHC system with the mentioned centers and organizations have caused promotion of healthcare indices during years, but its shortcomings and weaknesses have been ignored in the shadow of its achievements. Among these places neglecting gradually changes in the pattern of diseases, community needs, and epidemiological structures which have necessitated modifications in the PHC system.<sup>[4]</sup>

Many studies have been conducted about PHC in Iran, which have investigated its achievements and challenges in different parts, but there is no study on the future of PHC in Iran.<sup>[5–11]</sup> In a research project, Rajabi studied the future of healthcare delivery and identified social and technological trends affecting the health system in Iran.<sup>[12]</sup> In other countries, there are reports and articles that have examined the future of PHC from different dimensions.<sup>[13–15]</sup> Owing to the widespread changes in the healthcare needs, future studies in this sector enjoy a great importance.

The evidence shows that the PHC system is still a good and suitable way to achieve justice and promoting health status,<sup>[16]</sup> but, given the changes that have taken place, it seems necessary to identify social, economic, political, technological, environmental, and cultural factors influencing this system to improve the performance of health system. The aim of the present study is to identify the future trends of Iran's PHC system.

## Methods

### Design and data collection

Through a qualitative case study in 2017, the key informants about Iran PHC system including policymakers, faculty members, experts, and family physicians were selected purposively from the macro (Ministry of Health, The Academy of Medical Sciences of Iran), meso (Medical Universities, Iran Health Insurance Organization), and micro (Healthcare Networks, health houses) levels with considering the maximum diversity (heterogeneity). All participants were informed about the project objectives, and consent forms were obtained prior to the interview; each interview lasted 20–80 min and were conducted face-to-face. The interview place was based on the interviewee's request.

The used framework for conducting this study was STEEP model. The guide questions for semi-structured interviews were designed based on the dimensions of this model (e.g. What are the most important social trends affecting the future of PHC?). The interview questions were reviewed and finally approved by the researchers after doing the first deep interview. All identified candidates accepted our request to participate in the study. This way, the interview process was at saturation and stopping interview process was obtained at the 25<sup>th</sup> participant person. The researchers moreover taking notes during interview process, but also they transcribed total recorded interview after completing interview with each person. In

the Result section of this study, the letter (P) along with a number represents the participant who the researchers have quoted from.

### Data analysis

Framework analysis method which includes five stages of familiarization, understanding the conceptual framework, coding, drawing tables and mapping, and interpretation was used to analyze the data. During the familiarization phase, a form was codified containing information about individuals and a summary of the content of each interview. There were frequent meetings and discussions between the researchers to codify a primary conceptual guide form. The used framework in this study was also STEEP model. This conceptual framework was investigated by repeated reviewing of each one of the interviews. Then one of the authors coded each one of the interviews manually, and extracted a list of codes along with the relationships with the study framework. Then these codes were investigated by holding meetings with all researchers and were changed if necessary. This process was repeated for each one of the interviews and the conceptual framework of themes and subthemes in the process of conducting analysis was reviewed many times. At the last stage, the participants were asked to express their views and opinions about the study results, so hereby the validity of the results was evaluated.

### Accuracy and validity

We attempted to ensure the credibility, transferability, dependability, and confirmability of our findings. In this regard, we established a close relationship with the study participants and a prolonged engagement during data gathering, also we presented some of the encoded data to some of the participants, in the process named member check, to be confirmed data conceptualization. In addition, we tried to recruit a maximum variation sample of participants. To promote the study confirmability and consistency, using peer cross-examine, the first and fourth authors reviewed and checked the interpretations and codes.

### Ethical principles

In all stages of the study, from data collection to analysis and reporting results, cases such as informed consent, the preservation of anonymity, confidentiality of information, and the right to exit from the study at the desired time were observed.

## Results

Twenty-five participants from different levels of Iran health system were entered to the final step of the study. The characteristics of the participant are presented in Table 1.

The extracted codes were categorized and used as main and secondary themes after repeated data analysis and investigation [Table 2].

**Table 1: Characteristics of the participants in determining future trends of PHC in Iran**

Experience	Educational level (%)	Age (years)	Gender (%)
Faculty member of universities	Postdoc: 8 PhD: 76	Range: 36-68 Mean: 47	Female: 24 Male: 76
Vice-chancellor for health	MD: 16		
Expert of the Ministry of Health			
Health insurance manager			
Family physician			
Researcher			

### Social/value trends

The mentioned issues related to the social and value trends of PHC in Iran were divided into three main categories of demographic, epidemiologic, and cultural and social changes. The participants' comments in this regard included: "The demographic changes that have taken place over the years have not been addressed. These changes can be very influential" (P. 21). "The people's expectations have been changed. Previously, they easily accept a nurse; Nowadays, they only refer to specialists and supra-specialists to receive the same services" (P. 3). "Epidemiologic changes are one of the main factors that should be considered further in the future. Once upon a time, infectious diseases and childhood illnesses were very important. Diabetes and chronic diseases were not very important. But now and in the future, our PHC must be responsive to such needs more than before" (P. 8).

### Technological trends

Emerging new and advanced technologies and internet and cyberspace were identified as main concepts and themes. The participants' quotes in this field included: "The issue of Information Technology (IT) and availability of the information and raising the literacy of people will make major changes to service delivery" (P. 4). "By attention to the continuous advances made in the technologies, telemedicine will definitely be the main base that will affect primary health care" (P. 1). "Internet and cyberspace have expanded a lot these days. These can be both an opportunity and a threat to the future of PHC" (P. 18).

### Economic trends

The main extracted issues based on interviewees' comments which were related to the effective economic factors on PHC included budgeting restrictions of the health sector, resources management, and changing paradigm from volume to value in providing health services. The interviewees stated in this field that: "Economically, on the one hand, the services become expensive and, on the other hand, the economic state of the government weakens and

cannot afford to provide the necessary resources for health services" (P. 6). "One of the most important economic problems that our healthcare system has encountered with is about problems in payment system, so that the system pays attention to the services' volume more than their quality" (P. 12).

### Environmental factors

The main issues that were extracted from the participants' interviews which were placed in the environmental dimension included environmental pollutions and natural disasters. Quote related to this part includes: "Issues such as dust and drought in some areas and growing ecosystem change may cause evacuation of active workforce in some cities. This may change the process of health services' provision and resource allocation in the future" (P. 6). "Natural disasters such as earthquakes have increased in the country. This requires attention from a variety of dimensions. Disaster management should be included in the structure of PHC" (P. 22).

### Political factors

The interviewees referred to issues and factors in the field of political factors that are effective in providing health services properly. The main extracted issues based on the interviewees' comments in this dimension included health governance, intellectual paradigm of senior officials, regional security, and international development and advance. The interviewees stated in this field that: "The officials' point of view on PHC is not prevention and social based. They don't consider effective social factors on health. Apart from that, most of the officials work in therapeutic clinics or personal offices and offer private services in the evenings. Thus, their view is therapeutic based. If these cases become solved, so, our PHC have a better face in the future" (P. 11). "Political discussions are also very effective. In our country, all of the programs are changed by introducing a new official" (P. 3). "Regional security issues in the future will reduce the health sector's attention and also create mental health problems" (P. 25).

### Other factors

In addition to the above factors, other factors which were named as "other internal factors of health system" were extracted from the participants' interviews. These factors were placed in a separate dimension. The participants' quotes in this field included: "Our educations must be also changed. Our educations don't fit with the services we provide. These cases need research. One of the issues that cause resource wasting is low-quality, non-specialized, and non-functional educations" (P. 10). "It seems that our PHC really needs evolution, basically. The relationship between PHC and specialized higher grades is almost disconnected. Patients are not referred easily, their follow up is not possible in their first contact and this must be corrected" (P. 7).

**Table 2: Future trends of primary healthcare in Iran**

Model dimensions	Main themes	Secondary themes
Social/value	Demographic transition	Community age pyramid People's education level
	Epidemiologic transition	Changing diseases burden pattern Emerging newborn and reversible diseases
	Social and cultural changes	Social capital Marginalization Changing lifestyle Change in people's expectations
Technological	Emerging new and advanced technologies	The introduction of new technologies into the health services market Increased focus on evidence-based decisions Using and developing smart cards Healthcare beyond the place
	Internet and cyberspace	New educational technologies in educating people Offering non-attendance services Health management in cyberspace
Economic	Budgeting restrictions of the health sector	Economic sanctions Economic instability Paying attention to the resistance economy Expensive health services
	Resources management	Allocation of funds based on the actual priorities of community health Lack of attention to primary healthcare due to the slow return rate on investment Equalization of basic insurance Resource stability
Environmental	Changing paradigm from volume to value in offering health services	Payment mechanisms Comparing payments or payments gap
	Environmental pollutions	Climate pollution Fountains Increasing the number of wastes and their improper dispossession
Political	Natural disasters	Drought Earthquake Flood
	Health governance	Management stability Trusteeship role of the health sector Inter-sectional cooperation
Internal factors of the health sector	The intellectual paradigm of senior officials	The views of political parties and organizations on health Attention to health in other policy makings Partisan and political look into the health sector
	Region security	The political crisis in the region Paying attention to the security of the overseas and the marginalization of health
	International development	Globalization in health services International health relationships Modeling
Internal factors of the health sector	Evolution in medical education	
	Changing structure	
	Private sector position	
	Attention to health determinants	
	Trust in the primary healthcare system	

## Discussion

Through identifying and analyzing the governing trends on PHC system, it is possible to align PHC future policies with the trends. Undoubtedly, neglecting the focus of strategic policies on the opportunities and threats raised from these trends may create irreparable effects on efficiency and effectiveness of the programs. On the other hand, setting future policies on the basis of these trends can improve the performance of PHC system, so that it can strengthen non-communicable diseases prevention programs, decrease the costs, increase society trust toward health system, and lastly improve society health base.

Nowadays, there are strong scientific evidences that social factors have many effects on community health.<sup>[17,18]</sup> In the case of lack of attention to the determinant social factors on health, it cannot be expected that the PHC system achieve community's health improvement and promotion in the future.<sup>[18]</sup> The increased community expectation for higher quality services provide an opportunity for PHC system to find weak points and challenges through comparing the provided services with international and national standards and to plan for improving them.

Given the changing pattern of diseases and the growing trend of non-communicable and chronic diseases, if the PHC system does not carry out a risk factors prevention program and provide health services in the current routine, high burden of services and costs will be imposed to the health system in the future. Studies show that the diseases that have a high preventable burden will have a high prevalence rate in the future.<sup>[19]</sup> Therefore, there is an opportunity for the PHC system to decrease the diseases' burden in the future effectively by controlling effective factors on health, such as improving lifestyle.

Marginalization trend is one of the important issues effective on designing, planning, and administration of Iran's PHC system in the future. The increased marginalization has this threat that in case of neglecting this issue and not receiving support in solving this problem, inequities in the provision of health services will increase and this class will not benefit from basic health services with adequate quality.<sup>[20,21]</sup>

Decrease in social capital and increase in social anomalies are the threatening factors effecting on emerging and increasing diseases which lastly decrease public trust to the health system and effect on their participation in different dimensions. The growth of tendency to the fashion and unnecessary services cause the service providers, because of market stretch, present the services which are luxury not the real needed services of the people. The growth of services such as cosmetic surgeries and diet therapy cause disregarding PHC services which are basic and main services, so this increases health system costs.<sup>[22]</sup>

The studies show that proper use of new technologies can have a positive effect on controlling effective factors on health in different ways. For example, access to PHC can be enhanced by the proper use of information and communication technology.<sup>[11]</sup> The growing growth of new and advanced technologies also has this threat that more percentage of health system resources are devoted to them and attention to public health is decreased. Furthermore, in some cases, in spite of high cost of their production or importation, they may not have adequate and proper efficiency and are not in line with the priorities of the country's PHC system.

The development of information and communication technology increase the opportunity of evidence-based decision making at all levels. Technology provides the opportunity that PHC system-related information is being collected and analyzed easily, so that decision makers can use it better than before.<sup>[23]</sup> The development of information and communication technology and preparation of necessary infrastructure can result in the establishment of telemedicine. This change gives the opportunity to the health system to increase services coverage and distance service provision.<sup>[24]</sup>

Nowadays, the advanced technology has resulted in the increased availability of informational resources on the internet and cyberspaces which accelerate the information flow, increase health literacy, and lastly increase people awareness. Furthermore, it increases the participation of people and NGOs in the PHC.<sup>[25]</sup> However, the issue that becomes important by increasing access to informational resources is management of health information. In the absence of proper monitoring and management of the presented content, it can worsen the health status of the community.<sup>[26]</sup>

Increasing inflation and economic problems are serious health threats.<sup>[27,28]</sup> In this regard, budgeting restrictions happened in recent years, because of many causes such as economic sanctions and instability in the country, have effected Iran's health system. Lack of financial resources in the health sector will decrease allocation of resources based on the actual priorities of community health, so that authorities, because of low financial returns, focus and cost more in the treatment sector than PHC and prevention services.

One of the major economic problems of the health sector in Iran is related to the payment mechanisms for health services providers.<sup>[29]</sup> The current payment system encourages the provision of services in a volume-based manner not value-based. The health services providers attract more profits and earnings by providing more services for more people and thereby increase healthcare costs which cause inflation.<sup>[30]</sup>

Increase in environmental pollutions are among serious threats to health in the future, so that it destroy the country

natural resources that in one hand have negative effects on people mental health and on the other hand decreases life quality and increases health costs by increasing diseases.<sup>[31,32]</sup> Therefore, attention to crisis management in PHC system according to the growing trend of earth warming and the increased natural disasters can reduce severity and direct and indirect costs of these disasters.

One of the most important factors in successful administration of health system programs is political factors.<sup>[33,34]</sup> Management instability in health organizations is one of the main problems in this field. Many times, a manager understands the necessity for conducting a project and provides adequate support for it, but due to short duration of management, the project remains incomplete and receive insufficient supports by the new directors.<sup>[35]</sup>

According to the results, another political problem related to the correct performing PHC program is lack of transparency in stewardship function of the health system. In other words, health system to achieve its goals in implementing PHC need many parameters that are not necessarily available in the health sector; some parameters are inside the health system and others are outside that. Therefore, intersectoral collaboration in implementing PHC can be improved by increasing transparency in stewardship role of the health system for other sectors. This intersectoral collaboration is necessary for controlling the effective factors on health.<sup>[36]</sup>

Political crises in the region cause healthcare not considered as an important priority, so it does not receive the necessary resources. These crises diminish intersectoral collaboration and decrease necessary attention to the health outcomes in other policies.<sup>[37]</sup> The globalization can effect on PHC in two dimensions. One dimension is the effect of globalization on the community health and another dimension is its effect on the structure and performance of PHC system that the authorities must consider both dimensions in the future.<sup>[38]</sup>

Other factors are identified as effective factors on Iran PHC system in this study. Evolution in medical education, change in the structure, attention to the role of private sector, and trust in PHC system were the most important factors which should be considered by the authorities to have an efficient healthcare system.

## Conclusions

According to the social, economic, technological, environmental, and political changes and the emergence of new needs, it seems that the current structure of Iran's PHC system needs to be reviewed and reformed. The results of this study indicate that the various internal and external factors are effective on Iran PHC system. If these factors are managed correctly and health system planners and policymakers look deep and concise to the identified effective trends in the future, they can be transformed into

opportunities for Iran PHC system. Otherwise, each one of these factors will be considered as threats to the system. In order to align PHC system with the identified trends, it is recommended to perform dialogue-making about the importance of PHC and the necessity to correct its structure through research development. Another measures include adopting new behaviors and policies to develop health promotion culture through attention to the social health components, and development personal skills to improve self-care and lifestyle activities. In this regard, it is necessary to correct structure and the role of healthcare providers and health teams in accordance with the effective trends; also the stewardship role of health ministry should be specified clearly for all public and private sectors. Using regulatory mechanisms and enact needed laws in other country sections, health issue should be considered as the main priority.

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