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An Assessment of the Urban Family Physician Program in Iran from the Viewpoint of Managers and Administrators

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ABSTRACT

BACKGROUND AND OBJECTIVE: The urban family physician program was implemented in Fars and Mazandaran provinces in June 2012 to provide health services for the prevention, diagnosis and treatment of diseases and improvement of quality of life. Nearly five years after the performance record, this study was conducted to assess the urban family physician program.

METHODS: This cross-sectional study was conducted among the managers and administrators of the urban family physician program in all cities of Fars and Mazandaran provinces in the winter of 2016. The data were collected using a researcher-made questionnaire including two parts; the personal variables with 11 open and closed questions and the performance level of the urban family physician program with 18 questions in Likert scale with a score of one to five. The average overall performance of the five points was classified into three levels; poor (below 2.5) average (2.5 - 3.5), and good (above 3.5).

FINDINGS: Of 530 managers and administrators of the urban family physician program, 168 people (31.7%) assessed the performance of the program as weak, 295 people (55.7%) assessed it as average and 67 people (12.6%) found it to be good. The average overall performance of five points was assessed to be 2.83±0.64. There was a significant relationship between the province of service, the urban population of the place of service, education, field of study, service record, place of service, and the position of managers and administrators and their judgment in assessing the performance level of the urban family physician program ($p<0.05$).

CONCLUSION: The results of the study showed that performance level of the urban family physician program was average from the viewpoint of most managers and administrators.

KEY WORDS: *Assessment of family physician, family physician, urban family physician, managers' viewpoint, Fars province, Mazandaran province*.

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Introduction

The history of attention and emphasis on the implementation of the family physician program in the world health care system was proposed by Francis W. Peabody, a Harvard Medical Professor in 1923 and developed by the Millis and Willard Committees of the United States in 1966 (1, 2).

Family physician is the first person in the medical group to have the necessary skills in screening, diagnosing and treating patients, communicative skills and the ability to analyze psychological, economic and social dimensions at the first level of contact with people and patients, and thus manage the factors affecting public health. Family physicians who do not have complete information about family history of genetic and hereditary diseases, as well as the history of health and physical, psychological and social diseases of the covered families, cannot intervene adequately and effectively. Therefore, the family physician will be the confidant of families if they have the necessary features (3).

Given the positive achievements of the implementation and development of the family physician program and the new needs of the population, Family Medicine is considered by the World Health Organization (WHO) as the center of global efforts to improve the quality, effectiveness, equity and cost reduction of health care systems (4). Several studies have recently confirmed that family physicians can provide more effective care for preventing, treating and controlling certain types of illnesses (5, 6). In North America and Western Europe, the family physician is the focus of health services and the responsibility of the health team (7).

In Iran, the first reforms to provide basic health services started with the establishment of health-care homes in rural areas in 1977, and in order to expand it, the design and deployment of the healthcare network was approved by the Islamic Consultative Assembly in 1984. Family physician program and rural insurance was implemented to overcome a number of problems and disadvantages of the health system network, including inadequate access to health services and poor performance of referral system since 2005 in rural areas and cities of below 20,000 inhabitants (8, 9). Following the implementation of the family physician program and rural insurance, policymakers and country managers put the implementation of family physician program in the cities of 20 to 50 thousand inhabitants on the agenda and after the pilot stages of the program in some provinces, implementation of the urban family physician program version 02 was planned for the whole country, which was officially launched since July 2012 in two provinces of Fars and Mazandaran (10).

Few studies were conducted to evaluate the urban family physician program in Iran, each of which covered some of the issues. In a study that was conducted to evaluate the urban family physician program in six pilot cities covered by Ahvaz Jundishapur University of Medical Sciences in 2011, it was shown that the required human resources for covering the population were not provided and the most deficiency was related to nutrition experts and then, nurses and physicians, respectively. In the cities with second level referral system, the program was not well received by the specialized physicians who had office. In Mahshahr, only five specialized physicians and only 28.5% of eligible physicians enrolled in the program (11).

A study by Doshmangir et al. on the infrastructure of the establishment of family physician policies in Iran emphasized the imperativeness of the six infrastructures and concluded that unit trust in the health system, adequate funding, participation and interaction of all stakeholders for a precise, timely, and correct establishment and avoidance of power contradictions, determining rational tariffs and covering all people are some of the most important factors for the establishment of this national policy (12). Since evaluation of programs is inevitable to assess the progress and successes or to identify possible deviations and is one of the most important functions of management, it is necessary that any program, including the urban family physician program, be assessed and judged based on the method of implementation and its achievements, so that reforms and interventions are done and the existing shortcomings are addressed (13, 14).

One of the most commonly used strategies to assess the programs is a survey among people who are involved in the program. Managers and administrators of the family physician program in Fars and Mazandaran provinces are the most informed people regarding the strengths and weaknesses of the program and the can evaluate the performance of the program from different angles due to their participation in the implementation of the program, and because of the periodic monitoring or continuous exposure to providers and recipients of services. Therefore, this

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study was conducted to evaluate the urban family physician program in Fars and Mazandaran provinces from the viewpoint of managers and administrators.

Methods

After obtaining approval from the University's Ethics Committee, this cross-sectional study was carried out in Fars and Mazandaran provinces in the winter of 2016. The sample consisted of managers and involved experts and supervisors employed in healthcare network, hospital managers, manager and supervisor of health insurance organizations (health insurance and social security), manager and supervisor of the medical system organization, manager and supervisor of the Imam Khomeini Relief Foundation, and family physicians in charge of health centers in the cities of above 20,000 inhabitants in the two provinces. Managers and administrators with a minimum one year of active participation in the monitoring program or periodic visits from health centers and municipal health centers that implemented the program of the family physician program were included through census.

Data were collected using a researcher-made questionnaire containing two parts: individual, social and organizational variables with 11 questions (province and city in which the service was provided, the urban population of place of service, gender, age, education, field of study, total record of providing service, organization of service, current position, service record in current position) and assessment of the program with 18 questions (regarding the performance of family physicians and health care providers, partnerships and level 2 collaboration, and payment to physicians).

Its validity was superficially confirmed by experts through asking the opinions of six experts from among the managers and experts of Iran Health Insurance Organization, two experts from among the monitoring experts of the urban family physician program and three family physicians and the reliability was calculated by Cronbach's test (91%). To collect data, 16 panels of experts were held for 28 cities of Fars province and 13 panels of experts were held for 16 districts of Mazandaran province (smaller cities were invited to larger neighboring cities). Each held panel presented a brief description of the necessity of reforming the health system, the reforms implemented in the health system of Iran and how it was assessed. After presenting a brief description, panel participants were asked to judge consciously and responsibly regarding the 18 related questions, based on their understanding of how the urban family physician program is implemented and its performance in their city. Thus, the process owners of implementation of the urban family physician program completed the self-assessment questionnaire while presenting oral consent, and those who did not know about any of the 18 questions related to the performance of the urban family physician program and did not judge or assess its strengths and weaknesses were excluded.

All of the questions in the second part, which were of closed type, were rated from one to five based on Likert scale (very high, high, average, low and very low). The average overall performance based on a maximum of five points was classified into three levels; poor (below 2.5), average (2.5-3.5), and good (above 3.5). The collected data were analyzed by Kendall's test to determine the correlation between ranked variables, independent t-test and ANOVA for comparison of averages and chi-square for qualitative variables in SPSS-18 software and $p < 0.05$ was considered significant.

Results

Of the 530 managers and administrators of the family physician program in the two provinces of Fars and Mazandaran, 168 (31.7%) found the program performance to be poor, 295 (55.7%) found it average and 67 (12.6%) found it to be at a good level. The average performance of the program for managers and administrators was evaluated to be 2.83±0.64 from a maximum of 5 points (table 1).

Although there was no significant difference in the overall performance of the family physician program between the two provinces, there was a significant difference in some functions. Some functions such as not receiving fee from patients and timely care of pregnant mothers were the most suitable function, while delayed payment to family physicians, and low quantity and quality of referral feedback were the most inappropriate functions of urban family physician program. Judging about the performance of the family physician program based on individual and environmental variables was significantly different in some cases, such as the province of the place of service. The viewpoint of managers and administrators about the performance of the family physician program

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was significant (table 2) with respect to individual and environmental factors (except for gender and place of residence). There was a significant direct correlation between the age and viewpoint of managers and administrators regarding the performance of the family physician program (p=0.035, r= +0.085).

Table 1. The performance of family physician program from the viewpoint of managers and administrators of Fars and Mazandaran provinces

Performance level / Performance type	Fars		Mazandaran		Total		P-value
	Mean±SD	median	Mean±SD	median	Mean±SD	median	
Desirable physical space and clean centers and bases	2.90±1.1	3	3.45±0.9	3	3.14±1.0	3	0.614
The number of family physicians present at the time of duty	2.72±1.1	3	3.70±0.9	4	3.15±1.1	3	0.000
Prior arrangement of family physicians with related organizations and replacement of physician in case of absence	3.08±1.1	3	3.71±1.0	4	3.35±1.1	4	0.009
Observance on payment of health care provider's salaries to 12% per capita	2.55±1.2	2	3.12±1.1	3	2.80±1.2	3	0.000
Compliance with non-receipt of funds from patients for free services	3.41±1.2	4	4.13±1.0	4	3.74±1.2	4	0.000
Supply and completion of physical space and equipment required	2.73±1.1	3	3.44±1.0	3	3.04±1.1	3	0.162
Optimal implementation of service packages for covered diseases	2.46±1.0	3	3.27±1.0	3	2.81±1.1	3	0.161
Comprehensive data entry in the SIB system	2.30±1.0	2	3.42±1.0	4	2.79±1.1	3	0.083
Referral of patients in the context of actual indication	0.96±0.9	2	3.02±0.9	3	2.42±1.0	2	0.610
Supplying tools for injections and bandage	2.91±1.0	3	3.46±1.0	4	3.15±1.0	3	0.574
Collaborate in creating and enhancing extranet collaboration and engaging community participation	2.33±1.0	2	2.95±1.1	3	2.60±1.1	3	0.454
Organizing training sessions for target groups	2.05±1.1	2	2.77±1.1	3	2.36±1.1	2	0.683
Carrying out integrated health care (children, youth, etc.)	2.53±1.0	3	3.09±1.0	3	2.77±1.0	3	0.032
Identification and timely care of pregnant women	3.55±1.1	4	3.76±1.0	4	3.64±1.0	4	0.023
Quantity of feedback referral of level 2 physicians	1.86±0.9	2	2.56±1.1	2	2.17±1.1	2	0.000
Quality of feedback referral of level 2 physicians	2.01±1.0	2	2.30±1.0	2	2.14±1.0	2	0.431
Satisfaction with the monthly and seasonal payments to physicians	1.88±1.0	2	1.95±1.0	2	1.91±1.0	2	0.770
The adequacy of family physician's fee compared to other health care workers	3.20±1.0	3	2.85±1.3	3	3.05±1.2	3	0.180
Total	2.56±0.6	3	3.13±0.6	3	2.83±0.6	3	0.442

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Table 2. The performance of the family physician program in Fars and Mazandaran provinces based on individual and environmental variables of managers and administrators

Mean and Level of performance / Investigated cases	Total evaluator	Mean±SD	Good N(%)	Average N(%)	Weak N(%)	P-value
Executing provinces						0.000
Fars	290	2.56±0.6	11 (3.8)	145 (50)	134 (46.2)	
Mazandaran	240	3.13±0.6	56 (23.3)	150 (62.5)	34 (14.2)	
City of service						0.143
Academic City	138	2.73±0.6	13 (9.4)	73 (52.9)	52 (37.7)	
Non-academic city	392	2.85±0.6	54 (13.8)	222 (56.6)	116 (39.6)	
The urban population of the city of service						0.000
20 to 50 thousand people	187	2.77±0.6	17 (9.1)	113 (60.4)	57 (30.5)	
50 to 100 thousand people	143	2.79±0.7	20 (14)	71 (49.7)	52 (36.4)	
100 to 200 thousand people	61	2.55±0.5	1 (1.6)	31 (50.8)	29 (47.5)	
Over 200,000 people	139	3.03±0.6	29 (20.9)	80 (57.6)	30 (21.6)	
Gender						0.646
Man	291	2.85±0.6	40 (13.7)	162 (55.7)	89 (30.6)	
Woman	239	2.79±0.6	27 (11.3)	133 (55.6)	79 (33.1)	
Level of Education						0.000
BSc	251	2.70±0.6	23 (9.2)	130 (51.8)	89 (39)	
MSc	90	2.71±0.5	7 (7.8)	54 (60)	29 (32.2)	
Professional Doctorates	175	3.0±0.6	36 (20.6)	103 (58.9)	36 (20.6)	
PhD	13	2.94±0.7	1 (7.7)	8 (61.5)	4 (30.8)	
Field of Study						0.000
Medicine	187	3.05±0.6	38 (20.3)	109 (58.3)	40 (21.4)	
Paramedicine and Health Sciences	274	2.66±0.6	24 (8.8)	136 (49.6)	114 (41.6)	
Other fields (non-medical)	67	2.86±0.5	4 (6)	50 (74.6)	13 (19.4)	
Years of service						0.047
1 – 10 years	88	2.73±0.5	3 (3.4)	56 (36.6)	29 (33)	
11 – 20 years	278	2.84±0.6	37 (13.3)	156 (56.1)	85 (30.6)	
21 years and more	159	2.83±0.7	26 (16.4)	81 (50.9)	52 (32.7)	
Place of service						0.000
Health insurance	77	2.95±0.5	12 (15.6)	52 (67.5)	13 (16.9)	
Social Security	15	3.15±0.8	6 (40)	6 (40)	3 (20)	
Imam Khomeini Relief Foundation	25	2.89±0.6	5 (20)	13 (52)	7 (28)	
Hospital	31	2.65±0.5	0 (0)	19 (61.3)	12 (38.7)	
Network Headquarter or Health Center	268	2.65±0.6	19 (7.1)	136 (50.7)	113 (42.2)	
Administrative Health Care Center	114	3.11±0.6	25 (21.9)	69 (60.5)	20 (17.5)	
Current post						0.000
Boss, manager or deputy of the organization	155	2.81±0.5	18 (11.6)	18 (58.7)	46 (29.7)	
Unit official or expert	263	2.69±0.6	22 (8.4)	137 (52.1)	104 (39.5)	
Family physician responsible for administrative centers	110	3.16±0.6	26 (23.6)	67 (60.9)	17 (15.5)	

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Discussion

The results of this study showed that, from the viewpoint of managers and experts, the average performance of urban family physicians in various subjects was mostly average, partly consistent with the study of Ashrafian Amiri et al. who studied the performance of family physicians and rural insurance based on five main tasks from the viewpoint of managers and experts at the health center headquarters in the northern provinces of Iran (3). The World Health Organization in its report (2000) on "how to understand whether the performance of a health system is as expected, or is it capable of meeting it?" writes that the answer to this question depends on the respondent's personal viewpoint (15).

Based on this opinion and the results of this study, none of the principals or managers of the hospitals participating in the study judged the performance of the family physician program to be at a good level. Perhaps the group believed that the implementation of this program did not contribute to the reduction of hospital care demand. On the other hand, urban family physicians in charge of the health centers, and monitor the performance of family physicians in the private sector of their area, assessed the performance of the urban family physician program to be more appropriate than other study subjects.

Perhaps the mentioned group believes that the family physicians will be able to fulfil their duties and if the performance of the program is not as expected, it's not the physicians' fault and the causes should be sought in other components of the health system. The results of this study showed that the highest level of performance was due to not receiving money from patients for free services. The above-mentioned result could be regarded as praiseworthy due to the physician's creditorship and financial problems caused by delays in per capita, as well as the hardships that are imposed because of the free services.

The results of this study indicate that timely identification and care of pregnant mothers is among other performances that are above average. This performance can be considered as one of the program's capabilities in terms of prevention, given that most families are concerned about maternal and fetal health during pregnancy. Providing good and timely services to pregnant mothers while preventing unnecessary level 2 referral can also be considered as a necessary level 1 infrastructure for childbearing (16). One of the important functions of the family physician program, which may be the main expectation of policy makers and authorities, is the quality and quantity of referral of patients and its legalization. The present study suggests that the referral of patients from family physicians to level 2 is not much within the real indication framework, and the quantity and quality of feedback for referrals of specialists at level 2 are lower than the average level. The results of this study are consistent with the study of Damari et al., which evaluated the urban family physician program, and reported that some people believe the knowledge of general practitioners is not enough and this led to the failure to follow the referral system (17).

The lack of co-operation between family physicians and level 2 physicians, lack of providing feedback from specialists and non-standard completion of a significant percentage of referral sheets by family physicians, and specialism in physicians and families make people refer to specialists according to their own diagnosis (10). In a review article, the existence of multiple weaknesses in the referral system was one of the serious challenges in the family physician program and rural insurance (1).

Based on the present study and the study of Damari, the same challenge of the rural family physician program has been reported in the urban family physician program (10). In a study that considered the challenges and strategies of the country's health sector development from the viewpoints of health deputies of medical universities, it was shown that the health deputies of medical universities are faced with several challenges that are intensified due to being chronic and the additional load of implementing the family physician program and referral system and their effects can be observed both in the headquarters and in the universities implementing the family physician program (17). The results of this study and other studies conducted on the violation of the rules of referral in Iran (1, 9 – 10, 17 – 19), would be an alarm for policy-makers. If no solution is found, in order to strengthen the referral system, the family physician program gradually reaches a level of performance, which was previously experienced by healthcare system without a family physician program and bearing the costs associated with it over the past three decades.

This study showed that the lowest performance of the family physician program is associated with very low satisfaction with the monthly and quarterly payments to physicians. In the study of Jabari et al.,

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one of the weaknesses in the performance of the rural family physician in Iran was the lack of timely payment of the salaries of family physicians and midwives (19). In a study on the attractions and repulsions of the family physician's program from the viewpoint of senior medical students and family physicians, the economic-welfare dimension had the highest score among physicians with a mean of 3.84 and among students with a mean of 3.92 (20).

If according to the results of this study, the timely per capita reception is the highest attraction of the family physicians of the Fars and Mazandaran provinces, one of the obvious reasons for the lack of cooperation or inappropriate cooperation of family physicians in realizing the objectives of the program may be a delay in their per capita payment. One of the functions of the family physician program at a low level is to hold training sessions for target groups, which is consistent with other studies (3). Inappropriate performance in health promotion may be related to the inadequacy of intervention programs or the lack of related programs in monitoring organizations, which do not create the necessary mobility for the use of available capacity through the development of an operational plan.

The administrative centers can also support private sector physicians in organizing training sessions, including the place of training. This study showed that the performance of the family physician program in Mazandaran province (except for the adequacy of family physicians as compared to other health care staff), which was higher than Fars province, was significantly different in seven subjects. A significant difference in some of the functions of family physicians has also been reported in other studies (21–23). These differences may be due to several reasons, including the level of people's expectations and the first and second level providers, the rate of culture-building (educating and informing), the quantity and quality of monitoring and periodic visits, the quantity and quality of dealing with violations of the rules, whether by the people or by the providers, provide the necessary facilities, including timely payment per capita to family physicians and payment to physicians level 2 or other reasons.

Considering the fact that managers and administrators of Fars province saw the income of the family physicians to be adequate at a higher level, they may have judged it in line with the performance of family physicians and the level of their service comprehensiveness, which had a lower level of performance than Mazandaran province. According to the results of this study, it can be concluded that the performance of the family physician program in two provinces of Fars and Mazandaran, where there is a significant difference in some aspects, is mainly evaluated to be average.

It is recommended that the Deputy of Health of Medical Sciences Universities and Healthcare Network of the cities of the two Provinces, in cooperation with the insurance companies, design and implement interventional programs to improve the level of performance.

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