Original Article

Scrutinizing the Perspective of Family Physician Teams After the first Decade of Implementation of Urban Family Physician Program: A Thematic Qualitative Study from Iran

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Abstract

Background: Urban Family Physician Program (UFPP) passed the first ten years of its age in Iran. In this study, we aimed to determine the strengths and challenges of this program from the viewpoints of family physician (FP) teams to address comprehensive evidences and solutions for its improvement. **Methods:** In this qualitative study, using purposeful sampling, 58 members of FP teams from ten cities of Fars province were interviewed. In-depth semistructured phone interviews were performed. The trustworthiness of data was checked using Guba and Lincoln criteria. **Results:** Interviewees' mean years of working in UFPP was 6.9 ± 3.5 years. Themes of challenges included: Inefficient governance, Challenging information system, Fragile financing system, Inefficient service provision, Inefficient Health Workforce, and Inadequate medical products and technologies. Themes of strengths included: Improving governance, Comprehensive information system, Improved quality of service delivery, Improved health workforce conditions, Curbing the costs of health systems, and Capability of application of new technologies. The bulk of views were toward challenges compared with the strengths. **Conclusions:** After the first decade of running UFPP and regardless of some contradictory opinions among family physician teams, the challenges of this program outweigh its strengths. These evidences address the need for a fundamental reform in this program.

Keywords: *Challenges, family physician, Iran, program, solutions, strengths, urban*

Introduction

Family Physician Program (FPP) improves primary healthcare and quality of the health system, reducing healthcare costs, coordinating services, and controlling patient referrals.[1-8] Urban Family Physician Program (UFPP) was lunched as a pilot program with eight defined goals in 2012 in the Fars province of Iran.[9] Since then, this program led to some gains in the health system, however, it was also encountered to great challenges.[10-13] Therefore, this study aimed to explore the strengths and challenges of UFPP from the viewpoint of FPP teams 'members.

Methods

Study design and setting

This qualitative study was conducted in 2023 in Fars, Iran. In this study, a thematic conceptual content analysis was applied to explore the UFPP teams' opinions about the strengths and challenges of this program.

Sampling and data collection

At first, 31 cities of Fars province were divided into two groups of high population (over 50,000) and low population (less than 50,000). Then, five cities of each group were selected randomly. The target population was UFPP team members including FP, psychologists, nutritionists, dentists, public health experts, and midwives. Names and contact information of these groups were provided by the health deputy of Shiraz University of Medical Sciences (SUMS). In the next step, a purposeful sampling with a maximum diversity was applied to choose interviewees from the selected cities. The only exclusion criterion was nonwillingness to join this study.

Data collection tool and technique

All interviews were conducted via phone contacts because of wide geographical distribution of the target population, and logistical barriers in conducting face-to-face

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interviews. The interviews were conducted by a skilled interviewer with extensive experience in qualitative research. Once the study' aims were explained at the first call, an in-depth and semistructured interview was arranged with each participant at his/her preferred time.

In interviews, the participants were asked about the strengths and challenges of the UFPP. The follow-up/probing questions such as "What?," "How?," "Why?," and "May you explain more?" were also used to reach much more information about these aspects. Furthermore, note-taking was highly considered during the interviews. Interviews were recorded and continued until reaching the saturation of data; no new data was added, and no new code could be extracted. It should be mentioned that to ensure an accurate recording of the interviews, two voice recorders were used.

Data analysis

Data collection and analysis were conducted simultaneously. After each interview, the audio file was transcribed into open codes for further analysis. The transcripts and notes were carefully reviewed multiple times to develop a comprehensive understanding of their information. The thematic content analysis approach was applied.[14] This process involved reviewing the texts and extracting open codes. From there, concepts were developed, and these codes were further categorized into subthemes. Finally, the main themes were derived through the interpretation of the subthemes and were categorized according to the WHO health system's six building blocks; (i) Governance and leadership; (ii) Health information; (iii) Financing; (iv) Service provision; (v) Health workforce; and (vi) Medical products and technologies.[15]

Trustworthiness of the study

To ensure the trustworthiness of the data, the Guba and Lincoln criteria; credibility, confirmability, dependability, and transferability were used as scientific reliability criteria in qualitative research.[16] To ensure the transferability of the data, a comprehensive explanation of the subject matter, the characteristics of the interviewees, and the process of data collection and analysis were provided. This ensured that the findings could be applied and understood in various contexts. Furthermore, using purposive sampling methods enhanced the transferability of the findings. Credibility was ensured through the use of semistructured interviews, field notes, and deep engagement with the subject matter. In addition, constant peer probing, expert review, and member checking were used to validate the credibility of the data. To ensure the confirmability of the data, the lead researcher conducted multiple comprehensive review meetings to gather concepts and ideas from members of the research team. In addition, records of each step in the study were documented to support the confirmability of the data. It should be mentioned that an audit trail was accomplished by researchers familiar with the healthcare system and qualitative research. This process helped ensure the transparency and traceability of the research methodology and findings. Furthermore, the dependability of the study was verified through deep discussions with experts in the field and a review process involving the interviewees as well as other researchers.

Ethics statement

The ethics committee of SUMS approved the study's proposal, encoded IR.SUMS.REC.1401.330. Also, the 1964 Helsinki Declaration was considered in this study.[17] Before each interview session, participants were informed about the objective of this study and verbal consent was obtained from each of them. Furthermore, all interviewees were made aware that their participation in the study was voluntary and that they could withdraw at any point. In addition, interviewees were given the assurance that their interviews would be kept confidential, and stored anonymously, and after the article's publication, the audio recordings would be completely deleted.

Results

Demographic characteristics

Overall, 58 members of FPs' teams, including 39 females and 19 males, from ten cities of Fars province, Iran were interviewed. Their mean age was 39.6 ± 11.6 years old (median 34, minimum 24, and maximum 74 years old). Out of all interviewees, 32 had doctorate or PhD degrees and the rest had a lower degree of academic education. Furthermore, 35 were FPs, two were dentists, seven were midwives, two were nurses and four were from each of the fields of nutrition, psychology, and public health. Also, 27 were occupying in the public centers, 29 were in the private centers and two were in the both centers. Their mean years of working in the UFPP was 6.9 ± 3.5 years (median eight years, minimum one, and maximum ten years). Out of all, 32 were working as one shift per day, and 26 working as two shifts daily. Demographic characteristics are shown in the Table 1.

Challenges of UFPP

As Table 2 shows, 263 open codes, 51 concepts, 30 subthemes, and six themes about the challenges of UFPP were extracted. Themes included inefficient governance and leadership, challenging and nontrustable information

Table 1: Demographic and occupation characteristics of interviewees

ID	Gender	Age (year)	Job position	Section of occupation	Working experience in UFPP† (year)	City of occupation in the Fars province of Iran
≠1	Female	33	Family physician	Private	10	Fasa
≠2	Female	28	Public health	Private	4	Kazerun
≠3	Female	32	Psychology	Public	4	Kazerun
≠4	Female	32	Public health	Private	8	GhirKarzin
≠5	Female	33	Midwifery	Public	10	Shiraz
≠6	Female	43	Midwifery	Public	10	Shiraz
≠7	Female	40	Family physician	Private	10	Shiraz
≠8	Female	27	Family physician	Private	3	Shiraz
≠9	Female	28	Family physician	Public	6	Shiraz
≠10	Female	42	Family physician	Private	10	Shiraz
≠11	Female	31	Nutrition	Public	6	Shiraz
≠12	Female	33	Psychology	Public	6	Shiraz
≠13	Female	31	Dentistry	Public	1	Shiraz
≠14	Female	30	Public health	Public	2	Shiraz
≠15	Male	44	Psychology	Private	7	Shiraz
≠16	Female	42	Midwifery	Public	1	Shiraz
≠17	Female	34	Nutrition	Public	1	Shiraz
≠18	Female	27	Midwifery	Public	4	Lamerd
≠19	Female	42	Nursing	Public	10	Abadeh
≠20	Female	34	Psychology	Private	8	Abadeh
≠21	Female	26	Dentistry	Public	1	Abadeh
≠22	Female	30	Nutrition	Public	7	Neyriz
≠23	Female	30	Nursing	Public	6	Neyriz
≠24	Female	30	Midwifery	Public	5	Neyriz
≠25	Female	30	Public health	Public	7	Rostam
≠26	Female	25	Midwifery	Public	1	Pasargad
≠27	Female	24	Nutrition	Public	1	Sepidan
≠28	Female	24	Midwifery	Private	1	Sepidan
≠29	Male	46	Family physician	Public	10	Shiraz
≠30	Male	52	Family physician	Public and private	10	Shiraz
≠31	Male	55	Family physician	Private	10	Shiraz
≠32	Male	30	Family physician	Private	10	Shiraz
≠33	Male	51	Family physician	Public	10	Shiraz
≠34	Male	47	Family physician	Public	10	Shiraz
≠35	Female	34	Family physician	Public and private	7	Shiraz
≠36	Male	55	Family physician	Private	10	Shiraz
≠37	Female	53	Family physician	Private	10	Fasa
≠38	Female	38	Family physician	Private	8	Fasa
≠39	Female	56	Family physician	Private	10	Abadeh
≠40	Male	59	Family physician	Private	10	Abadeh
≠41	Male	29	Family physician	Private	4	Kazerun
≠42	Male	59	Family physician	Private	10	Neyriz
≠43	Female	34	Family physician	Private	2	GhirKarzin
≠44	Female	52	Family physician	Private	10	Shiraz
≠45	Male	52	Family physician	Private	10	Shiraz
≠46	Male	45	Family physician	Private	10	Lamerd
≠47	Male	60	Family physician	Private	10	Sepidan
≠48	Female	49	Family physician	Private	10	Shiraz
≠49	Male	53	Family physician	Private	10	Shiraz
≠50	Male	56	Family physician	Private	10	Fasa
≠51	Female	33	Family physician	Private	5	Shiraz
≠52	Male	42	Family physician	Public	8	Shiraz

Contd...

Table 1: Contd...

ID	Gender	Age (year)	Job position	Section of occupation	Working experience in UFPP† (year)	City of occupation in the Fars province of Iran
≠53	Male	74	Family physician	Private	10	Shiraz
≠54	Male	33	Family physician	Public	6	Shiraz
≠55	Female	31	Family physician	Public	8	Shiraz
≠56	Female	32	Family physician	Public	1	Shiraz
≠57	Female	30	Family physician	Public	1	Shiraz
≠58	Female	52	Family physician	Private	10	Shiraz

†UFPP: Urban Family Physician Program

systems, inappropriate and fragile financing, inefficient service provision, inefficient health workforce and resource limitations, and inadequate medical products, vaccines, and technologies.

Theme 1: Inefficient governance and leadership

Weak planning, insufficient intra and intersectoral collaborations, uncertainties in UFPP, fragile advocacy, inefficient referral system, not building trust, lack of proper preparation, lack of FP teams' authority, inefficient monitoring and evaluation, and failure to quality improvement were the subthemes. Below some examples of quotes are shown.

About the rules and regulations of UFPP, one of the interviewees said; "*...the rules and regulations in this program are not very clear and even harm the health team and the people too. For example, in psychology section, people expect to solve psychiatric problems in the health care center but it has conflict with the ministry's instructions which has announced that the number of counseling sessions is limited."* A large number of interviewees believed that the long period of implementation of the UFPP as a pilot program was one of the important challenges and this factor became the basis for subsequent problems. They also pointed out that the new policymakers do not agree with the implementation of this program and only because of the coercion and previous approvals, this plan is still being implemented in this province, and it has been practically left without a trustee. Among other challenges of UFPP is lack of support for FPs and forcing general practitioners to join this program. For example, insurance systems sign contracts with only doctors who join this program. *"...Living in Fars province is one of the reasons why you should be an FP. I didn't have other options...*" Interviewees, also expressed that one of the most important factors that contributed to the failure of the UFPP was, firstly, not using the opinions of experienced FPs in the running of this program, and secondly, the lack of effective communication between related departments. They also mentioned that this program failed in its most important goal, i.e. the proper implementation of the referral system and reducing the costs of the health system. One of the most important reasons for this lack of success was free visits by FPs at the beginning of the project, which led to the induction of referrals to the FPs and repeated requests to receive a referral form for referrals to the specialists. An interviewee mentioned; *"...it might be interesting. Once someone brought his child to me just because their child had made an excuse to go to the doctor. I examined him completely but didn't find any illnesses. Then I got upset and said Why did you do this? Am I sitting here without any work? He said, Doctor, why are you upset? Come and take my blood pressure instead!!! or A patient came to me and said Doctor this time give me two referral forms. I said, 'Why? He said that psychiatrist prescribes less medicine so that I have to visit him again soon..."*

According to the participants, failure to provide specialists' feedback to the FPs, and failure of specialists to follow the chain of referrals are among the obstacles to achieving an appropriate referral system. The absence of a proper specialist referral system in dentistry is also too obvious. A dentist acknowledged: "*.... There was no proper referral system and the provision of necessary and more specialized services such as root canal treatment of permanent teeth or orthodontic treatments was not predicted in the referral system. Therefore, those who are among the low-income groups cannot refer to the specialized centers."*

Participants mostly mentioned that no effective action has been taken to introduce UFPP in the society and people have not been informed enough about this program. People prefer to go directly to the specialists and do not have trust in FPs. Free visits at the beginning of the project, along with not educating people about the project, caused other problems. For example, many people thought that low-quality and worthless services were being provided due to the cheapness of the services, and they did not trust and pay attention to the treatments by FPs and their orders. This issue became one of the big challenges of FPs with patients. A challenge that FP faced every day.

Another serious problem from the FPs' point of view was the rude behavior of some patients and their unreasonable requests. Many FPs believed that the implementation of the UFPP has led to their desecration by the people and this led to exhaustion and burnout of them. *"...People think we are their slaves. For example, one of my patients came and gave me a form to stamp*

Table 2: Challenges of UFPP from the view point of family physician teams

Theme	Subtheme	Concept	Open code
Inefficient governance and leadership	Weak planning	Weak and unclear strategies and legislation in the UFPP	1. Absence of a clear and comprehensive plan for UFPP
			2. Lack of proper insight and the same perspective of the policymakers on the UFPP.
			3. Absence of a specific goal for the project.
			4. Noninvolvement of FPs and community medicine specialists in the planning of UFPP.
			5. Ignoring the predictions and resistances of general practitioners against the program before its implementation.
			6. Incompatibility of the UFPP with the country's health system.
			7. Inconsistency between the service delivery, supervisory, and implementing bodies in the current program.
			8. Obvious flaws in the content of UFPP.
			9. Lack of clear law for UFPP.
			10. Bugs in the rules of UFPP.
			11. Removing the parts of UFPP regulations that include the doctor's benefits.
			12. Nonsuccessful implementation of copied foreign versions of UFPPs.
			13. Failure of the dispensation of the authority and total discretion about the implementation of UFPP to the Fars province by the Ministry of Health.
			14. Changing free to charging services caused the public's dissatisfaction with this program and brought a face-to-face challenging status between FPs' teams and people.
		Conflict of interests	1. Conflict of interest in program planning (planners are medical specialists).
			2. Inability of insurance systems to supervise and regulate specialist doctors in the UFPP.
			3. More payments of insurance systems to specialists who filled referral forms compared witth before implementing UFPP.
			4. Insurance is the only authority to confirm or reject complaints of doctors against insurance.
		Obligatory participation	1. General practitioners' hateful mentality toward the UFPP because of the mandating of joining this program at the beginning of its implementation.
			2. People's hateful mentality toward the UFPP because of the mandating of joining this program at the beginning of its implementation.
	Insufficient Intra and intersectoral collaborations	Inappropriate intrasectors collaboration	1. Lack of the authorities' information about the details and rules of the UFPP.
			2. Lack of correct and appropriate information transfer between officials and implementers in the medical university.
			3. Lack of coordination between different health units (occupational health, family health, etc.) in the medical university.
			4. Lack of proper communication between the FP, FPs' team, and clients.
		Poor intersectoral collaboration	1. Lack of coordination among various organizations for successful implementation of the UFPP.
			2. Noninteractive relationship between insurance systems and FPs.
			3. Not covering of UFPP by some of the insurance systems such as armed forces, and oil companies' insurance systems.
			4. Influence of the insurance bodies on the policymakers and opposition to the UFPP in this way.
			5. Diminished cooperation of private sector doctors because of deductions.

Contd...

Table 2: Contd...

Theme	Subtheme	Concept	Open code
	Uncertainty	Unsustainability in the implementation of UFPP	1. Rapid change and high turnover of policymakers.
			2. Lack of policymakers 'familiarity with the UFPP.
			3. Implementation of the UFPP in only two provinces, after ten years of its starting.
			4. Uncertainties about the continuation of UFPP.
			5. Uncertainties about the extension of UFPP to other provinces.
			6. Changing the direction of the initial plan because of obstacles and moving away from the initial goals.
			7. Disagreement of the new policymakers with the program.
			8. Discordance among managers of UFPP.
	Fragile advocacy	Low attention to the FP team's demands and challenges	1. Failure to solve and handle problems of FPs by the Ministry of Health managers.
			2. Policymakers do not allocate FPs' representative and do not hear their voices.
			3. Failure to fulfill the promise to improve the situation of the UFPP team by the authorities.
			4. The project managers do not have the experience of working in the UFPP or do not have a real understanding of the role of FPs.
			5. Failure of managers, insurance, universities, and people to fulfill their obligations toward the FPs and UFPP.
			6. Absence of a complaint system for FPs despite the existence complaint system for people.
			7. Lack of support of FPs by related institutions.
			8. Inappropriate behavior of insurance companies with FPs.
		Low cooperation of people in UFPP	1. Inappropriate support and cooperation of people in the UFPP.
	Inefficient referral system	Incompetency of the referral system	1. Lack of enculturation and knowledge of people about the referral system.
			2. Refusal of specialist doctors to cooperate with the UFPP.
			3. Specialists do not accept patients who are referred by FPs.
			4. Not filling the referral forms and resending them by specialists to the FPs.
			5. One-way and out-of-reach specialized services.
		Regulation insufficiency	1. Limitation of the number of patients who can be referred per month to the specialists by each FP.
			2. Possibility of direct referral of patients without a referral form to some specialists and special clinics.
			3. The lack of proper training of doctors to implement good referral systems.
		Induced demand	1. Many reasonless referrals to the FPs for visiting because of low franchise.
			2. Referral of patients to the FPs only because of minor illnesses.
			3. People's lack of knowledge about the disease treatment process and their unnecessary requests for referring to specialists.
	Not building trust	Lack of clients' trust	1. People do not go to the FPs and do not have trust in the abilities of FPs and their teams.
			2. People's willingness to be visited directly by specialists.
			3. lack of trust of people toward the abilities of FPs' teams.

Contd...

Table 2: Contd...

Theme	Subtheme	Concept	Open code
			4. People's fear of expressing psychological problems and risky behaviors and unwillingness to register such information in the system.
			5. Low acceptance and adherence of people to routine care.
			6. Patients do not follow FPs' recommendations.
		Specialists' pessimistic view and lack of trust in the UFPP	1. Special doctors' economic and negative views toward the UFPP.
			2. Lack of trust and respect of specialist doctors for FPs.
	Lack of proper preparation	Weak infrastructure	1. Nonavailability of the necessary infrastructure before starting the UFPP.
		Lack of public awareness and culture building about UFPP	1. People's lack of knowledge and failure to inform them about the UFPP and its goals.
			2. People are not concerned about prevention as much as treatment.
			3. Lack of awareness and justification of the people about their rights and duties and the position of doctor and patient in the UFPP.
			4. Unreasonable people's expectations and requests about UFPP; they expect to receive free medicine, expect to do things quickly expect their medical needs to be met by FPs.
			5. People consider UFPP as a cheap service or as a worthless service.
			6. Failure to use NGOs, universities, mass, and social media to raise awareness of and educate people about UFPP.
			7. Time-consuming to educate all people about UFPP.
		Lack of preliminary preparation of FPs and their teams	1. Failure to enough training for FPs and their teams before they join UFPP.
			2. The lack of training for all doctors to work with computers.
			3. Lack of specialist information about UFPP.
	Lack of FPS team authority	Disrespect, insolence, and ignoring the position and responsibilities of FPS teams	1. People do not care about the job and position of the FP team.
			2. Recognizing the FP as who just completes the sheets or refers them to the specialists or prescribes what they want.
			3. Attempts to desecrate the position of the doctors in the media and virtual networks.
			4. Discrediting FPs.
			5. People's aggressive behavior toward FPs.
			6. Ingratitude, insulting, and complaint against the FPs in case of their resistance against unreasonable demands.
			7. The FP is the weakest part of the program (instead of being the strongest part and managing the program).
			8. Family physicians do not have enough power to control people and specialists.
	Inefficient monitoring and evaluation	Non-professional and non-ethical monitoring and evaluation	1. Lack of respect for the FPs in the process of monitoring and evaluations by authorities.
			2. Irrational criticisms of FPs by the authorities.
			3. Damage to the FP's reputation because of the supervisor's asking people about the FP's work.
			4. Program monitoring is based solely on statistics and not paying attention to the quality-of-service delivery.
			5. Failure to evaluate the mid-term and long-term results of the program.
			6. Not paying attention to the level of people's satisfaction toward UFPP.
			7. No attention to the realities and pay only to the predetermined and theoretical measurement standards in the monitoring and evaluation of UFPP.

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Table 2: Contd...

Theme	Subtheme	Concept	Open code
			8. Lack of statistics fact-checking.
			9. Lack of sufficient baseline data (before implementation of UFPP) for before-after implementation comparisons.
			10. Entering fake information into the "SIB" system to not reduce salary (in some cases).
			11. National inspectors check only a limited number of known FPs' clinics.
			12. Failure to evaluate the UFPP in terms of health economics and cost reduction.
			13. The monitoring system pays attention only to the negative points.
			14. The efforts and performance of the FP teams are not visible in the monitoring processes.
			15. Demotivating evaluation system.
			16. Inappropriate and rude behavior of the evaluators with FPs' teams.
			17. Lack of feedback on the performed monitoring of the FPs.
			18. FPs do not have a role in the monitoring and evaluation.
			19. The commanding and threatening tone of the authorities towards the doctors.
			20. One-sided and illogical decision of the arbitration committee when the FP is convicted.
	Failure to quality improvement	Nondynamicity of UFPP	1. Failure to solve problems despite the passage of ten years of starting UFPP.
			2. Addressing marginal issues instead of correcting the main ones.
			3. Failure to implement suggestions and requests of FPs.
		Data fabrication	1. The supervisors persuade FPs to provide unrealistic statistics (in some cases).
			2. Decrease in honesty in providing statistics because of high pressure on the FPs and their teams.
		Induction luxury services to compensate for the insufficient income	1. Forcing FPs who work in the private sector to perform cosmetic work and outpatient surgeries to cover the expenses of the office.
			2. Forcing FPs to visit a large number of out-of-insurance coverage patients to cover the costs of the office.
			3. Forcing FPs to work in private clinics because of low income.
			4. Physicians' preoccupation with financial issues and failure to focus on the purpose and principles of the UFPP.
Challenging and nontrustable information system	Inappropriate health information system (HIS) and data-gathering approach	Problems in the SIB system	1. The real addressee of the SIB system is the health care provider, not the FP.
			2. Impossibility of registering all diseases in the "SIB" system.
			3. Slow speed of the internet, nonupdated, and difficult user interface of the SIB system.
			4. It is time-consuming to register health information in the SIB system.
			5. The disclosure of patient information in the SIB system (the information can be seen by all personnel).
			6. Repetitive and unnecessary questions instead of operational ones in the "SIB" system.
			7. Failure to fix the "SIB" system's problems.
			8. Lack of enough time for the doctor to register all the diseases in the SIB system.
			9. Low accuracy of registered data.

Contd...

Table 2: Contd...

Theme	Subtheme	Concept	Open code
			10. The lack of integration of the "SIB" and electronic prescription systems and the impossibility of registering the desired para clinical tests and examinations in both systems.
			11. Cares which were determined in the SIB system are not well related to health.
Inappropriate and fragile financing system	Ambiguous paying mechanisms	Lack of transparency	1. Absence of a regular payment structure.
			2. Failure to explain to the FPs the reason for the decrease in the amount paid.
			3. Declaring the deductions and their reasons after deducting from the doctor's salary, not before that.
			4. Impossibility of calculating fees due to delay in payment.
			5. The organization that pays salaries to the FPs is not defined in the initial contract.
		Low payment	1. Nonconcordance of FP's facilities, time, and salary with the expectations of people, experts, and officials.
			2. Low salary of FPs and their team members.
			3. Departure of a large number of members of UFPP because of low salaries.
			4. The FP's income is lower than that of emergency doctors and general practitioners.
			5. Very small amount of per capitation FP' salary.
			6. Disproportionate expenses and salaries of FPs.
			7. Disproportionate salaries and inflation rate.
			8. High expenses of the FPs.
			9. FPs cannot afford to pay their teams' salaries.
			10. Nonincrease of the per capita even after FP's great efforts for tariff increase.
			11. Fixed payment to the doctor, not matching it with the work quality.
			12. No change in the payment as the doctor's experience increases.
		Delay in payment	1. Delay in payment of salaries by insurance systems and paying a part of salary over a long-time span.
			2. Nonresponsiveness insurances about the delayed payments.
		Unfair and inappropriate payment mechanisms	1. Absence of paying per case.
			2. The difference in per capita amount between a single-shift doctor without overlap physician and a single-shift doctor with overlap, even with the same working hours and service provision.
			3. Nonfulfillment of obligations to increase payment.
			4. Payment to the FPs is done by insurance systems instead of universities.
			5. Health team dissatisfaction with the salaries and payment methods.
			6. Injustice in payment.
			7. The difference in salaries between different fields working in the UFPP.
			8. Lack of proportionality between the payment and duties.
			9. Disagreement with paid leave of FPs' team members.
			10. Dominancy of FPs' opinions in determining the payment structure for their team.
			11. The personal opinion of the FP is considered in reducing or cutting the salary and insurance amount of the FP team members.
			12. Not paying doctors' fees during the COVID-19 pandemic.

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Table 2: Contd...

Theme	Subtheme	Concept	Open code
			13. Not paying doctor's fees by insurance companies for irrational reasons.
			14. Ignoring doctors' overtime working in payments.
			15. Applying significant and multiple numbers of deductions without a logical reason.
			16. Nonrefunding the fines, after proving the insurance's mistake and FPs' innocence.
			17. Additional tax for younger physicians under the title of "Ghasedak" and "Pellekan" programs.
		Ambiguity in the contracts	1. Dumb initial contract with many legal defects (in other words, whatever they leave to FPs, they must do it).
			2. Imposing multiple screening programs during the implementation of UFPP on the FPs in contrary to the initial contract.
			3. Absence of a single authority to specify the duties of FPs.
			4. Absence of a bilateral contract between the insurance and the FPs and the lack of clear description of the duties and legal penalties of the insurance.
			5. New requests from FPs by insurance.
	Conflicts with employers	Ambiguity about the employer of FP's team members	1. Not defined the employer of the FP's team members in the initial contract.
			2. Determining the FP as the FP's team employer and forcing him/her to pay their salary.
			3. Contradiction of the rules of the university, Social Security Organization, and the employment office regarding the provision for paying FPs' team members.
	Insurance problems	Insurance-UFPP mismatching	1. Excluding drugs from insurance coverage without valid reasons.
			2. Lack of a scientific view of the insurance on the UFPP and having a commercial approach to it.
			3. Insurance dissatisfaction in case of the low number of FPs' visits.
	Insufficient funding	Shortage of budgets	1. Failure to provide enough funds for the maintenance and upgrading of the UFPP.
	Increasing out-of-pocket (OOP) expenditure	Increasing trend of OOP	1. Nonfree visits by FPs in opposite to the beginning of the program.
			2. Reduction of free medicines.
			3. Lack of cost reduction in para clinical centers.
	Increasing financial burden on the health system	nonindicative referrals, diagnosis, and treatments	1. Inducing additional costs for the health system and insurance organizations by implementing UFPP.
Inefficient service provision	Nonguideline-based approach	Nonindicative referrals	1. Failure to implement correctly the instructions of the UFPP guidelines.
			2. Early referral of patients to a specialist by some FPs without initial precise examination.
	Inefficient responsiveness	Low responsiveness	1. Failure to comply with the FP's role as the health system's gatekeeper.
			2. Nonallocation of appropriate time for patients by some FPs.
			3. Lack of successful follow-up because of the high cost of some para clinics and medicines.
			4. Inappropriate response to the people.
			5. Absence of an updated system to notify FPs about the patients who have withdrawn from the insurance coverage
			6. Lack of appropriate physical space leads to the loss of patient privacy in the FPs' centers.
		Prolonged waiting time	1. Long waiting time
			2. Lack of an electronic appointment system for visiting patients
		Shortages in facilities	1. Constraints in physical space and equipment in the FPs' centers

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Theme	Subtheme	Concept	Open code
		Instability	1. Unstability of covered population by UFPP.
		Problems related to the electronic prescribing (e-prescribing) system	1. Impossibility of long-term drug prescriptions for patients. 2. Electronic prescription registration problems (low internet speed, server outage, not having all drugs' names in the system, not receiving the tracking code). 3. The lack of integration of the prescription systems and the differences in the medicine codes in each system. 4. Exhaustiveness of the electronic prescription process and disruption of the doctor's concentration to examine and diagnose the next patient because of the electronic prescription problems.
		Underestimation of prevention	1. Services in UFPP are mainly treatment-based and prevention has not been valued and applied for clients as much as treatment. 2. Lack of officials' and insurance companies' attention on prevention and their attention is more treatment-based.
	Inappropriate coverage	No good coverage of UFPP by insurance systems	1. Providing services to patients with insurance is performed only in governmental centers. 2. Lack of insurance coverage for some para clinic services and medicines if prescribed by an FP. 3. Insurances do not cover preventive approaches. 4. The impossibility of visiting patients who are not covered by UFPP
	Poor quality services	Poor quality of services	1. Decreasing the quality of services in UFPP because of extreme emphasis of evaluators and managers on health statistics and figures instead of services' quality. 2. Failure to allocate time and energy for patients, causes errors in diagnoses by physicians. 3. Entry of incompetent doctors into the program because of low payment. 4. The FP does not have accurate information about the health indicators of his/her population because of low public cooperation. 5. Limited time for visiting patients. 6. Reducing the doctor's accuracy in examining patients due to unnecessary and excessive visits. 7. Inadequacy of the covered population with the necessary care. 8. Failure to achieve treatment goals because of high covered population. 9. High effect of job instability on FPs' services quality.
	Nonmotivating system	Punishment-based management	1. Priority of punishment instead of incentives and encouragement. 2. Disagreement with paid leave of healthcare workers. 3. Lack of enthusiasm in the UFPP. 4. Employees' demotivation approaches. 5. Termination of cooperation of specialists with the UFPP. 6. Dissatisfaction and lack of interest and encouragement among FPs' teams. 7. Lack of welfare and well-being for FPs' teams. 8. Failure to meet FPs' expectations from the program. 9. FPs do not have holidays. 10. Lack of insurance and pension benefits for the FPs. 11. The impossibility of using medical university facilities by FPs although they are working for the university. 12. Failure to pay attention to the FP's health.

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Table 2: Contd...

Theme	Subtheme	Concept	Open code
	Low meritocracy	Nonmeritocracy-based employment	1. Incorrect evaluation indicators for recruitment. 2. The impact of recorded quantitative indicators on the future employment of employees. 3. Injustice in the facilities and benefits between official and corporate employees. 4. Employing some people with unrelated academic fields as members of FP teams.
Inefficient health workforce and resources limitations	Noncomprehensiveness FP team	FP team does not cover all health needs	1. Restrictions on the selection of FPs' team members from special fields, while the need for experts from other fields has remained unmet.
	Low job security	Job instability	1. Low job security for nonofficial employed staff in UFPP. 2. Uncertainty and frequent changes of regulations in UFPP threaten the future of work for members.
	High burnout and wasted time	FPs' teamwork overload	1. Overpopulation covered by each center. 2. Large and unreasonable number of people visited by each doctor in each working shift. 3. High workload of the FPs team. 4. Visiting patients even after working hours. 5. Mental exhaustion and burnout in the UFPP team. 6. Inappropriate working conditions. 7. Inappropriate working hours of two working shift doctors. 8. Time between two shifts is unusable for the FPs. 9. Restriction of not working in the opposite shift for overlapping single-shift doctors. 10. Long working hours for FPs. 11. High and variant and increasing expectations from FPs. 12. Assigning the responsibility of culture building in society about UFPP to FPs. 13. Unreasonable expectations from FP teams to reach the predefined indices. 14. Forcing (abuse) FPs to rewrite specialists' prescriptions in the electronic prescription system. 15. Insufficient number of FP members compared with the large number of covered people. 16. Occurrence of physical illness because of high work pressure and stress. 17. Permanent occupational stress because of job instability. 18. Long and time-consuming routine care. 19. Failure to provide conditions for participating FPs in the training programs.
	Lack of professional association	Lack of professional confederacy for FP teams	1. Lack of professional association for FP teams.
	Inefficient training and retraining programs	Fruitless training	1. Sameness and non-contextual based on subjects that are taught for FPs in the different cities. 2. Not using educated experts to hold training courses. 3. Failure to hold special training courses for FPs. 4. Inapplicability of training classes.

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Table 2: Contd...

Theme	Subtheme	Concept	Open code
			5. Internet outage and low quality of virtual training programs. 6. Lack of training of FP teams on how to properly perform screening tests and educate people. 7. Interference between the hours of the retraining program and the FPs' working hours. 8. The impossibility of participation of all FPs who work outside of the capital of Fars province in retraining programs (because of space, time, and cost limitations). 9. It is not possible for FPs (who work in the same center) to participate together in training courses (one person must be in the center as a substitute for another). 10. Failure to properly educate the medical communities about the UFPP. 11. Treatment-oriented view of midwives and nurse assistants to the UFPP. 12. Educations are not appropriate to the level and type of trainees. 13. Educations are not welcomed by FP teams. 14. Receiving high fees for participating in the retraining courses.
Inadequate medical products, vaccines and technologies	Insufficiency of medical drugs	Not availability of some medical drugs	1. Patients are looking for some drugs from door to door.
	Not using available technologies	Not using E-health/ Telehealth/m-Health	1. E-health/Telehealth/m-health systems have not been used in the UFPP.
		Not using social networks	1. Social networks have not been used in the UFPP.

his child's health form. When I said that I would not do this and it is not my duty, he shouted and finally, because of this, he said that I want to cancel and go under the cover of another FP..." Another FP mentioned; *"Unfortunately the respect of the FP has dropped drastically. A patient came to me and told me frankly, Doctor, give me a referral form, and write a laboratory test and ultrasound for me. Apart from the fact that it makes my job very difficult, it is showing me his vision towards me..."*

"... Recently, specialists give their prescriptions and tell patients to go to their FPs to register them in the electronic prescription system because they don't have time to enter the system. It's wrong but this is not culturalized and people look at me as a discount coupon to visit the specialists..." Among the other challenges of weak leadership in the UFPP was the wrong way of monitoring and evaluating this program, which was done only based on statistics. This excessive insistence on statistics many times has led to the presentation of fake and false statistics by FP teams. *"...The way of evaluation is completely wrong. Evaluators sit there and check to see how many ticks I checked, how many blood pressures I took, how many medicines I prescribed, and how many people I visited. If the number is high, I am a good doctor, if the number of ticks is low, I am a bad doctor. The quality of my work does not matter at all..."*

"...Evaluators expect us to fill the SIB system [Integrated health system in Iran which is a system for registering patients' information system] *and if it is not done. then they protest. Then when we bring the reason, they say just enter this fakely...*"

Theme 2: Challenging and non-trustable information system

The subtheme of this theme is inappropriate health information system (HIS) and data gathering approach. Many participants complained about the defects of the SIB system. Participants mostly expressed that the SIB system causes too many problems for employees and the low speed of the internet has made these problems more severe. The electronic prescription (e-prescription) system and the lack of its integration with the SIB system, caused FP to have to register the prescription in the both systems. Some FPs said that working with the SIB system is so exhausting that the doctor is unable to maintain his concentration and calmness for the proper examination of the next patient. Interviewees also said that the most important drawback of the SIB system is the excessive and unnecessary care which are defined in it, so most of the FPs mentioned that it is impossible to perform all the care. They mentioned that the only way to avoid deductions of salary is to record fake information in this system. One of the interviewees claimed that "*...some caregivers have to enter a lot of fake information. Because, if the scores are not desirable, salaries will be reduced."*

Another participant believed that *"…there are so many tasks which should be done about the care of pregnant mothers by FP instead of doing them by midwives. As a result, pregnant mothers don't receive these cares enough..."*.

Theme 3: Inappropriate and fragile financing

This theme includes subthemes of ambiguous paying mechanisms, conflicts with employers, insurance problems, insufficient funding, increasing out-of-pocket (OOP) expenditure, and increasing financial burden on the health system. All participants agreed that financial problems are as one of the main problems in UFPP implementation. Frequent complaints about financial problems shows the high importance of this issue. One of the most important challenges mentioned by all interviewees was the small amount per capita for each FP and also the small amount of salary that is paid to the FPs. Interviewees mentioned that this amount is so low and insufficient that many general practitioners and clinics have refused to cooperate with the UFPP. A participant said: *"Really, compared to the work we do and the expectations that managers have of us, our salaries and benefits are very low, and I don't know who is responsible at all?! So far, no one has responded at all."* Another participant said: *"…If you calculate my visit numbers per month and multiply it by the visit fee set by the Ministry of Health, my receipts should be around 80-90 million Tomans per month, while my receipt is around 20 million Tomans per month. Furthermore, the salary of my team and side expenses should also be paid from this amount."*

The interviewees were also very dissatisfied about the non-implementation of approvals and promises by the medical university about increasing the amount of per capita and per capita payment for FPs. "*... It is very interesting that social security insurance agents very easily walk into the doctor's office and claim that HCWs are defined as your workers and must be paid by you (as the employer), while the university has considered that neither the doctor is the employer nor HCWs are the employee!*," as one of the FPs explained. He also added "*…At the beginning of the program, the officials said that HCWs' salaries should be 12% of the doctor's salary which was more than the labor department salary. They did not increase our per capita income during these ten years so it is no longer enough. Now 12% of my salary is about 3 million Tomans, while the salary of the labor department is about 5.5 million Tomans. It has been halved because our per capita hasn't raised. After that, it was decided that the university should raise the salaries of HCWs. But it didn't happen."*

Another challenge that FPs are faced, was the insurance's delay in paying their salaries. This delay in payment even reaches several months. It is worth noting that the insurance is not regarding itself as responsible for this delay and arrears. Another challenge that was mentioned by many FPs was the implementation of punishment instead of a proper and encouraging incentive system. Most of the interviewees complained about numerous unreasonable insurance deductions and reductions of their salaries without justified reasons. Some others criticized why the reduced fine from doctors' salaries is not used as an incentive for committed doctors. They mentioned that this issue has caused the insurance companies to compensate for their budget deficit by reducing doctors' salaries. Several doctors stated that the amount paid by the insurance is not clear and the doctor does not know the amount of the salary and the amount of the fine. A FP mentioned; *"…If I am an insurance employee, why am I not insured? If I am not an insurance employee, then how can the insurance organization specify my working hours, and my tariff, what kind of partnership is this? From the legal point of view, everyone's duties must be specified, and the legal description and legal punishments should also be included in it."*

Theme 4: Inefficient service provision

Subthemes of this theme include non-guideline-based approach, Inefficient responsiveness, Inappropriate coverage, Poor quality services, nonmotivating system, and Low meritocracy. There are some issues with service delivery in different sections of UFPP, for example in the nutrition section, one of the interviewees explained; "*The impossibility of implementing the diet therapy program in the UFPP, failure to refer some chronic patients to a nutritionist (despite the existing necessity such as patients undergoing dialysis) and limitation of the time of consultation sessions, are among examples of important challenges in this sector.*" Another reason for reducing the quality-of-service delivery, as some of the participants pointed out, was paying too much attention to the statistics, so a large part of the efforts and attentions of the FPs and their teams was spent on completing wanted (and not necessarily real) statistics. Among the other challenges of this part, which we can point out is the lack of equipment in FPs' offices due to the high costs of the offices and the low income of doctors. The lack of an appointment system for patients was another problem.

Theme 5: Inefficient health workforce and resources' limitations

This theme includes subthemes such as Non-comprehensiveness FP team, Low job security, High burnout and Wasted time, Lack of professional association, and Inefficient training and Retraining programs. Ensuring the job security of the health team is one of the things that have not been seen in the program, and this has had a significant impact on the workforce's motivation. Rapid changes in regulations and uncertainties in the program aggravate feelings of job insecurity among FP teams. Burnout was another challenge of UFPP. A small number of FPs and HCWs compared to the covered population and tasks has caused them to undergo a heavy workload.

The interviewees were very dissatisfied with long and separated working hours. A large number of FPs who work in two shifts believe that the time between shifts is useless. Many of the interviewees stated that lack of insurance and retirement benefits and inappropriate behavior of insurance and arbitration committees with FPs are pieces of the puzzle that together lead to severe burnout and frustration among them. A family physician explained; *"As a double shift doctor, I have to come from 8 am to 12 pm and from 4 pm to 8 pm. These 4 hours in the middle are useless to me and it bothers me physically and mentally. I'm obliged to see every patient who comes to me, there is no maximum for my visits…."* Among other challenges of human resources, is the lack of effective training and retraining programs. A participant acknowledged: *"They have monthly meetings, they explain one or two very difficult chapters in two hours, we don't even get to take notes, we don't know where they came from!!!"*. He added, "*Many doctors mentioned that they are not able to participate in training classes due to training programs being held during their working hours*."

Theme 6: Inadequate medical products, vaccines, and technologies

Insufficiency of some medical drugs and not using available technologies are the subthemes of this theme. Lack of some medical drugs is one of the challenges that were repeatedly addressed by interviewees, a participant said; *"…Unfortunately, there is a shortage of antibiotics and intravenous fluids in the pharmacy, the patient has to spend an hour or two looking for medicine, search all the pharmacies in the city for an antibiotic."* Another problem is not using electronic health (e-health), mobile health (m-health), telehealth, and social networks in the UFPP. These facilities can increase the scope, speed, and quality of the services, while decreasing the costs.

Strengths of the Urban Family Physician Program

As Table 3 shows, 60 open codes, 15 subthemes, and six themes about the challenges of UFPP were extracted. No concept was extracted. Themes include improving leadership and governance, comprehensive health information system, improved quality of service delivery, Efficient health workforces, curbing the costs of the health system, and capability of application of new technologies.

Theme 1: Improving leadership and governance

Improved people's health awareness and improved monitoring and evaluation are the subthemes of this theme. From the start of UFPP till now, people gradually became more sensitive to their health and their related awareness has increased. One of the participants mentioned about strengths of the monitoring system in the UFPP. He said: *"Monitoring has made progress compared to the early stages of the project."*

Theme 2: Comprehensive Health Information System

Improved recording and registering system is the subtheme of this theme. It is leading to the availability of health information, thereby health providers can make significant decisions and efforts. Most of the participants also acknowledged that the SIB system has improvements and the most common strength of it, is access to the patient's health information and records. "*You can retrieve information from the SIB system very easily. as it contains information about various diseases. Everything that is recorded is stored with the date and time in this system."*

Theme 3 Improved quality of service delivery

Increased responsiveness, holistic view toward people's health, improved referral system, discipline in treating patients, enhanced affordability, active and dynamic surveillance system, and increased service accessibility are the subthemes of this theme. The participants often held the same point of view about service provision. They mostly indicated that prevention and treatment services have been improved. One of them explained: *"According to the long-time training of people in this program; better control of diseases became possible."* Another aspect of service provision in the UFPP is the presence of a nearly complete healthcare team in the health centers; as a participant stated, *"The nutrition and psychology experts in our clinic have solved many people's problems. The expensive nutrition programs, are provided for free by our nutrition expert here."* Among the other strong points of the UFPP, is improvement in disease prevention. This happened with the implementation of screening programs, active surveillance systems, and early diagnosis of diseases in this program. One of the other achievements of the UFPP has been increasing access of the deprived groups of population to the primary health care services. One of the other most important benefits of the UFPP is the increase in the quality of services provided. Regular visits of chronic patients and adjustment of their medications, better and faster diagnosis of diseases because of the FP's previous familiarity with the people, having a holistic view toward people's health, preventing unnecessary tests, and improving the health of mothers, children, and women, are among factors that have been achieved through the UFPP and have led to an increase in the quality of services. For example, a FP said: "*The quality of health care has improved a lot. Now it seems that the care of women, children, and pregnant women has become much more precise and clear in UFPP. In the past, many pregnant women had insurance, but they did not visit a doctor until they were close to the delivery, and no one followed them up. But now, with the UFPP, many of these diseases are diagnosed soon and this could prevent many consequences in them."*

Some of the FPs explained that one of the most important and obvious benefits of the UFPP has been reducing people's expenses. Reasons for reducing costs include

Table 3: Strengths of UFPP from the viewpoint of family physician yeam

Theme	Sub-theme	Open code
Improving leadership and governance	Improved People's health awareness	1. People's education and culturalization about the efforts of FPs.
		2. Sensitization of people and increasing their awareness of their health.
		3. People's access to the correct medical information.
		4. Training along with providing medical services for the population.
	Improved monitoring and evaluation	1. Improving monitoring by registering in the SIB system and fixing system bugs.
		2. Evaluation of the diseases' prevalence by FPs in the covered population.
		3. Monthly monitoring improves performance and fixes defects.
		4. Great progress of the UFPP compared to its beginning.
		5. Better monitoring of health care workers.
Comprehensive information system	Improved recording and registering system	1. Establishment of an Informative integrated health system which is named "*SIB system*"
		2. Access to the patients' health information and records such as previous regimens and underlying diseases.
		3. Up-to-date statistics and information about the covered population.
		4. Collection of population health determinants.
		5. Completion of patients' health records.
		6. Protecting patient privacy in the SIB system.
Improved quality of service delivery	Increased responsiveness	1. Strengthening the physician-patient relationship.
		2. Building trust in the doctor-patient relationship.
		3. Direct communication with the clients and create a sense of humanity.
		4. Lack of financial relationship between FPs and patients.
		5. Increasing the respect to the FPs (compared with the start of the program).
		6. Easy access to the people and helping and serving them.
		7. Providing services per the needs assessment.
		8. Providing a wide range of services.
		9. Improved prevention services compared with the start of the program.
		10. Optimal control of diseases, especially infectious diseases such as leishmaniosis, pediculosis, etc.
		11. Effective screening of colon and cervical cancer.
		12. Better and faster diagnosis of diseases.
		13. Facilitate the treatment pathway for chronic patients.
		14. Assigning a physician to the limited and defined population and a better physicians' control over the covered population.
		15. Unity and integrity of the population.
		16. Better provision of primary health services.
		17. Providing service packages for different groups of patients such as women, children, pregnant women, chronic patients, etc.
		18. Improvement of health indicators.
	A holistic view of people's health	1. The presence of experts with different disciplines in the FP team.
		2. Having a comprehensive view of population health.
	Improved referral system	1. Improved referral system between some specialists such as gynecologists, pediatricians and FPs (compared to the start of the program).
		2. Preventing waste of money by implementing the referral system.
	Discipline in treating patients	1. Discipline in treating patients.
		2. Reducing patient wandering.
	Enhanced affordability	1. Providing low fee services to the patients (doctor visits, tests, medicines, etc.).
		2. Justice-oriented service delivery by improved health services to the lower deciles of society.

Contd...

Table 3: Contd...

Theme	Sub-theme	Open code
	Active surveillance system	1. Implementing an active surveillance system. 2. Defining and Improving of the medical and non-medical determinants of non-communicable diseases.
	Increased service accessibility	1. Facilitating people's access to health services and general and specialist practitioners. 2. Good cooperation of pharmacies, laboratories, and imaging centers with FPs.
Improved health workforces' conditions	Creating opportunities for young doctors	1. Job position creation for newly graduated young doctors. 2. Creating opportunities to gain experience and skills for young doctors.
	Suitable working condition	1. Regular and suitable working hours and having more free time compared with doctors who work in hospitals. 2. FPs do not have working shifts. 3. Timely payment to the doctors who work in the governmental FP centers. 4. Peace of mind in the work environment of FPs. 5. Gaining a variant work experience by FPs. 6. FPs' team members have a job position that is related to the field of their academic study. 7. Not moving away from the educational environment by providing up-to-date information and practical and appropriate training classes.
	Provided motivation	1. Giving a prize by insurance to the exemplary doctor. 2. Improving the occupational identity of the doctor compared with the emergency doctor.
Curbing the costs of the health system	Reducing the cost of the health system	1. Reducing the cost of hospitals because of implementing UFPP. 2. Preventing unnecessary tests because of the doctor's previous familiarity with patients.
Capability of application of new technologies	Electronictechnologies as an opportunity in UFPP	1. Using e-prescription system by FPs is an opportunity for applying a better medical care for patients. 2. UFPP has the potentials for using e-health and other new technologies such as Artificial Intelligence (AI) for improving quantity and quality of health care.

visiting a general practitioner and a specialist at a low cost, insurance coverage of drugs which are prescribed by FPs, and performing para-clinical tests for free or at a very low cost. This has helped to move towards justice in the health care services. Another advantage of UFPP is the lack of financial communication between the doctor and the patient, which prevents many consequences.

Theme 4: Improved health workforce conditions

Creating opportunities for young doctors, suitable working conditions, and providing motivation are three subthemes in this group. The participants have different opinions about health workforces, some stated that improvements have been made in the training classes for FPs' teams. An interviewee expressed; *"the latest and most up-to-date health information is conveyed in the training classes, and subsequently they were passed to our patients."* Creating opportunities for young physicians to experience working with people and having a regular working schedule were among the other strong points of UFPP*." Being as a FP will introduce me (as a young doctor who just started work) to the local people especially if I want to work there as a general practitioner who may not cooperate with the UFPP in the future."*

Theme 5: Curbing the costs of the health system

This theme included the subtheme of reducing the cost of the health system. According to some of the FPs, UFPP causes a reduction in the costs of health system by improving the prevention of diseases, implementing the referral system, and also preventing prescribing repeated tests and drugs. *"…I think assistants place is in heaven because I saw exactly how hard they work. We [FPs] also were able to treat blood pressure and vitamin D deficiency. I have personally treated about one thousand of vitamin D deficiency patients and this will reduce the burden of the hospital admission due to bone fracture."*

Theme 6: Capability of application of new technologies

The subtheme of this theme is electronic technologies as an opportunity in the UFPP. Electronic prescription (e-prescription) system as a replacement for former traditional paper-based prescription is used by FPs and is providing a better care for patients. Coverage of the internet and the percentage of persons who use intelligent phones in the Fars province are high and this creates a great potential and opportunity for improving service provisions in the UFPP. Artificial Intelligence (AI), also should not be neglected due to its capability to improve the quantity and quality of health services.

Discussion

This content analysis-based qualitative study was conducted in the Fars province, the fourth most populous province of Iran with five million population. The main aim of this study

was to determine the views of FPs and their teams about the strengths and challenges of UFPP, after its first decade of age. Interviews were performed with 58 members of FP teams from ten cities. The themes of challenges were: Inefficient governance and leadership, challengeable and nontrustable information system, Inappropriate and fragile financing system, Inefficient service provision, inefficient health workforce and resources' limitations, and inadequate medical products, vaccines, and technologies. Six themes of strengths were: Improving governance, comprehensive information system, improved quality of service delivery, improved health workforce conditions, curbing the costs of the health system, and better application of medicine and technology. The bulk of views were toward challenges compared with the strengths.

Challenges of UFPP

According to the previous studies about UFPP, sociocultural and economic challenges, interpersonal communication difficulties, and inefficient management in UFPP were highlighted.[11] Because of the results of another study, the problems of UFPP in Iran were classified into seven categories including financial, cultural, educational, motivational, structural, administrative, and contextual problems.[12] Policymakers believe that the most common challenges of UFPP are: 1) organization (ununited stewardship function of the Ministry of Health, weak management and planning, inadequate training of human resources, and a weak referral system); 2) financing (fragmented insurance funds, insufficient financial resources, and instability of financial resources); 3) payment (inappropriate payment mechanisms and delay in payments); 4) regulation (cumbersome laws and unclear laws); and 5) behavior (cultural problems and conflict of interests).[18]

Another study remarked that despite the ambitious goals, implementing UFPP has not been without challenges. Poor management, weak infrastructure, sociocultural and economic barriers, diversity of insurance organizations, inefficient referral system, and defects in the electronic file were enumerated as challenges of this program.[10-13] Professor Imanieh (SUMS' president at the time of starting UFPP), explained the constraints of UFPP as: The governmental and parliamentary decision-makers' faith in this initiative was insufficient, centralization and decision-making in Tehran (the capital city of Iran), absence of an electronic health record platform and lack of cooperation between health and insurance authorities in developing appropriate software. He added other challenges of UFPP as poor cooperation of some specialists/subspecialists with the program, preference of some citizens to immediate referral to the specialists/subspecialists (they assume FPs as barriers to direct referrals), lack of regular decision-making meetings in Tehran to update and modify the program, inconsistent payment to FPs, impatience of some FPs and their withdrawal from the program, and the refusal of some parliamentarians to cooperate with this program.[9]

According to one study which was conducted in the first five years of implementation of UFPP in the Fars province, Iran, people were not highly satisfied with UFPP,[19] whereas two other studies showed that people did not have appropriate knowledge and practice toward this program.[20,21]

Studies about the challenges of FPs in other countries show more or less similar findings to this study. A study in Alberta, Canada showed key challenges that affect FPs. These challenges were workload and time pressures and meeting demands; the need to promote the rewards of family practice to those considering joining the profession; overhead and income inequities; getting respect from specialists; the need to ensure that the rewards identified are not adversely affected by primary care reform; lack of availability of specialists, procedures, tests, and other resources; running a practice as a small business; paperwork, telephone calls, and forms; maintaining and acquiring skills and knowledge; patients' expectations; and medicolegal issues and insurance paperwork.[22] Challenges of family doctors in Singapore included four domains: people, processes, systems, and networks.[23]

Another study in India revealed the need for clear guidelines that integrate and promote family medicine practices at the point of care and also recommended interdisciplinary synergy across related disciplines through the integration of teaching, training, and practice of the FPs as a whole.[24] Family medicine in Uganda has not yet found a stable niche within the healthcare system because of the lack of proper institutionalization of it in the healthcare system of that country.[25]

Strengths of UFPP

Along with the many challenges of the project during the interviews, health teams also mentioned significant benefits. According to the interviewees, among the important positive features of UFPP are: improved community health knowledge, and improved prevention and treatment services. Professor Imanieh (the former president of SUMS and manager of UFPP in 2012) mentioned that UFPP has several achievements as access to free or low-cost services for low-income patients, better distribution of physicians, pharmacies, laboratories, and other health facilities, identifying 10,000 cases of occult diseases such as hypertension and type 2 diabetes, raising the value of general practitioners by encouraging patients to refer to them and if necessary, referring the patient to a specialist and employment of a large number of general practitioners, nurses, midwives, and other health personnel. He also added that in most cases, an increase in FP's income and a gradual shift away from treatment-based medicine toward health-based medicine happened, whereas most physicians' knowledge was being updated, and this program gave medical students optimism for their future positions and job.[9] According to one study in Alberta, Canada, key rewards that affect FPs were providing comprehensive and

preventive care; having a good interaction with patients and their families; being an immersed witness to the human condition; providing continuity of care and receiving ongoing feedback; having flexibility and control of practice and job security; maintaining and acquiring skills and knowledge; teaching and sharing knowledge and gaining experience and mentoring.[22]

Solutions

To combat the challenges of UFPP, a fundamental reform in the different aspects of this program is needed. Some recommended solutions are doing evidenced-based and evidence-informed reforms without conflict of interest, making transparency in the policies and plannings, more attention to the prevention and giving priority to it over treatment, continuous culturalization of and trust building in the people about UFPP and more communication of policymakers and managers of UFPP with FPs teams and people and attention to their voices about this program. Furthermore, coverage of UFPP by all basic insurances, strengthening of infrastructures, observance of meritocracy in the selection of managers, directors, and FPs teams, stability in the managers and regulations, more intra and inter departments cooperation and coordination and reform and transparency in the payment system are recommended. However, need to improve the referral system at all levels, focus more on human resources and advocate them to prevent their burnout, modify training and retraining courses for FP teams, supervision on trainers of FP teams and establishment of an encouraging, motivational, and quality-based monitoring and evaluation systems should not be overlooked. Furthermore, integration and accreditation of information systems, reliving shortages of SIB and e-prescription systems, providing medical drugs, facilities, and equipment to provide better and fair accessibility to health services and followings; especially for disabled and chronic patients, and using technologies such as e-health and artificial intelligence (AI) in the process of education, empowerment and healthcare provisions are important for consideration reform in the UFPP. Similarly, another study recommended some of the above solutions to improve the implementation of UFPP; such as enhancing the role of government; improving the referral system; providing comprehensive training for UFPP providers; considering sustainable financial resources; moving toward mixed-payment mechanisms; employing appropriate legal and regulatory frameworks; enhancing community awareness; and elevating incentive mechanisms.[18] Another study emphasized educational planning for public culture-making, revision on the number of people that are covered by each doctor, aggregation of insurance, and legal requirements for specialists to cooperate effectively to improve UFPP.[26]

A qualitative study in Mazandaran province of Iran concluded that for improvement of UFPP, changes in five domains of financing, financial payments, regulations, organizing, and behavior are needed.[27]

Strengths, Limitations, and Recommendations

As the strength points, conducting this qualitative study after the first decade of implementation of UFPP in Iran provided valuable insights about ups and downs of this program from the perspectives of different members of UFPP teams. These evidences would be beneficial for improvement and nationalization of this program. As a limitation, this study was conducted through phone interviews but not as face-to-face interviews. Apart from the possible impact of the absence of nonverbal cues on findings, telephone interviews are shorter or less comprehensive than face-to-face interviews. As recommendations, we recommend to study also on the viewpoints of other stakeholders in the UFPP; including patients, policymakers, and members of the community. Enhancing the qualitative findings of this study with next quantitative study would address to a more comprehensive understanding and general representations of the UFPP's strengths and weaknesses.

Conclusions

Regardless of some contradictory opinions among family physician team members, challenges of UFPP outweigh its strength points. Therefore, this program needs a fundamental reform. This reform should include, the priority of prevention over treatment, culturalization in people, communication of policymakers with FPs teams and people, coverage of UFPP by all insurances, strengthening of infrastructures, and meritocracy and stability in this program. Furthermore, intra and interdepartments coordination, reform in the payment system, improving referral system, advocate health workforces, modifying trainings, supervision on trainers, integration and accreditation of information systems, providing more facilities in the health services, and using new technologies should also be regarded in this reform.

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Ethical considerations

The 1964 Helsinki Declaration was considered in this study (17). Before each interview session, participants were informed about the objective of this study and verbal consent was obtained from each of them. Furthermore, all interviewees were made aware that their participation in the study was voluntary and that they could withdraw at any point. Additionally, interviewees were given the assurance that their interviews would be kept confidential, and stored anonymously, and after the article's publication, the audio recordings would be completely deleted.

Code of Ethics

The ethics committee of SUMS approved the study's proposal, encoded IR.SUMS.REC.1401.330.

Authors contribution

Conceptualization, and Project administration: BH and KBL. Data collection: ZZJ, NRR, YK, FS, FZJ, and MH. Data analysis and interpretation: HJ, SS, MAM, MNK, ZZJ, NRR, YK, and FZJ. Writing the manuscript: BH, KBL, HJ, SS, MAM, MNK, ZZJ, NRR, YK, FS, MH and FZJ.

Also, all authors approved the final version of the manuscript and are responsible for the whole of that.

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Conflicts of interest

There are no conflicts of interest.

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