










# Outsourcing of Pharmacies of the Program "Family Doctor and Rural Insurance" of Comprehensive Health Service Centers of Iran

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## Abstract

**Background:** This study aimed to explore the advantages, disadvantages, and outsourcing solutions for pharmacies within Iran's "Family Doctor and Rural Insurance" program at comprehensive health service centers.

**Methods:** This qualitative research utilized the snowball method and maximum diversity sampling to conduct interviews. The criteria for participant selection included a minimum of three years of experience in the Family Doctor and Rural Insurance program and sufficient knowledge of its processes. After categorizing the data, logical connections were established using MAXQDA version 2022 software.

**Results:** A total of 40 individuals were interviewed. The most significant benefits of outsourcing identified by respondents included improvements in quality, the use of software systems, and better management of financial resources. Key operational solutions for enhancing outsourced pharmacy services included identifying high-performing contractors, signing contracts with these contractors, and implementing a qualification test approved by the pharmaceutical affairs department under the university's vice-chancellor of health.

**Conclusions:** To improve the delivery of services by outsourced pharmacies, it is recommended to incorporate expert opinions (particularly from pharmacists) when setting up and finalizing contracts. Additionally, a wide-scale announcement should be made to encourage greater participation from private sector pharmacies.

**Keywords:** Outsourcing, Pharmacy, Family Doctor Program and Rural Insurance, Comprehensive Health Service Centers, Iran

## 1. Background

The implementation of the family doctor plan is considered a foundational measure and a significant advancement in the health insurance sector in Iran. It aims to improve the provision of healthcare services and streamline the referral system, with the most important outcomes being the reduction of confusion among people seeking medical care and an increase in their satisfaction with health services (1). The design and

implementation of the family doctor program have been part of the country's health system since 2014, with the goal of reducing disparities and ensuring equitable access to available facilities. This program also facilitates the fair distribution of health services across less populated areas of the country. In Iran, level-one services have an average per capita cost of 1,210,000 rials per year, with pharmaceutical services and supplements accounting for 13.5% and 4% of this expenditure, respectively. The family doctor program introduced a

medication prescribing framework, limiting doctors to prescribing drugs within a defined list (2).

Providing medicine is an essential component of primary healthcare and a government obligation. Medical services, both outpatient and inpatient, hold a special place due to the influence of various economic, social, and cultural factors that have made drug therapy the primary method for disease prevention and treatment in society. To ensure the availability of effective, safe, high-quality medications at prices affordable for both the government and the public, each country needs a national drug policy as part of its overall health policy. Reforming pharmaceutical policy in developing countries is among the most critical areas of health sector reform, with the World Bank and the World Health Organization agreeing on the necessity of reorganization (3).

The Ministry of Health, Medicine, and Medical Education, in its efforts to rationalize government size, strengthen accountability, and enhance the efficiency of health services and medical education, has implemented measures aligned with Note 5, Article 2 of the 1982 budget executive regulations and the third development law. These measures aim to reduce public service tenure and optimize resource utilization through continuous monitoring. As part of this initiative, the ministry implemented a plan to reduce contracting and outsourcing in support services across 41 pilot hospitals (4). Outsourcing refers to transferring services or functions traditionally performed by the organization to an external supplier, managed through a contract or cooperative agreement (5), according to the theories of Lacitti and Cox. During outsourcing, attention should be given to factors such as the scope and activities outsourced, evaluation methods (e.g., lack of evaluation, supplier performance comparison, or internal activity review), supplier comparisons, contract type (e.g., standard, detailed, combined, strategic cooperation), contract duration (< 3, 3 - 8, > 8 years), contract timing, and satisfaction levels (e.g., full, partial, lack of satisfaction, or undefined satisfaction) (6).

According to Mugin, global revenue for pharmaceutical factories outsourced in 2004 was approximately 100\$ billion, growing to 168\$ billion by 2009 at a rate of 10.8% (7). A comparison of employee satisfaction levels before and after pharmacy handovers indicates improvements in areas such as the delivery of drugs and equipment, quality enhancement, and staff satisfaction. Issues related to staff attitudes, problem-solving capabilities, the elimination of expired drugs, and, most importantly, the provision of rare medications have been addressed, contributing

significantly to improved staff satisfaction and service quality (8).

For various reasons, organizations have consistently shown enthusiasm for breaking down their structures into smaller units and cells by outsourcing their activities. The primary reasons for outsourcing can be summarized as follows: Limited time, high costs, better quality, prioritizing vital activities, cost reduction, weak performance of internal units, and the non-vital nature of certain outsourced activities. Other factors include the need to carry out activities beyond the organization's expertise, insufficient specialization within the organization to provide specific services or products, lack of potential control over certain internal activities, the existence of services and activities not aligned with the organization's long-term goals, previous successes in outsourcing external activities, creating an environment conducive to internal changes, and limited financial resources or capital required for new technical investments (7).

Outsourcing can also improve responsiveness, transparency, and legitimacy within the system by stabilizing service provision through local management systems, increasing citizen participation in service delivery by creating systems that encourage their involvement in planning, resource allocation, monitoring, and service evaluation. Additionally, it can promote justice in service delivery by enabling poor and marginalized populations to access healthcare providers and enhance the private sector's role in healthcare provision by separating the financial responsibility for services from their delivery—key goals of decentralization (9). Outsourcing reduces costs, enhances organizational focus on core activities, provides opportunities to streamline internal processes, mitigates risks by partnering with external units in uncertain business environments, improves customer service, reduces employee numbers, and fosters competition within different organizational segments, addressing inefficiencies (10).

In Iran, recent years have seen an emphasis on outsourcing healthcare services to the private sector to improve quality, enhance patient satisfaction, and reduce costs. This approach has been particularly prominent in the field of pharmaceutical services within medical centers (11). Globally, the ineffectiveness of drug supply management systems managed by governments has been identified, and transitioning these services to the private sector or involving private sector partnerships has been proposed and implemented as a solution (12).

In the outsourcing model of pharmaceutical services in health and treatment centers affiliated with medical universities, three medical service insurance organizations act as financial resource providers and buyers. These organizations purchase health service packages from city health and treatment networks, which, based on local conditions, may hand over pharmaceutical services in subordinate medical health centers to the private sector (secondary buyer role) (13).

Pharmacies, as profitable units, when handed over to the private sector, can not only maintain their original quality and minimize production costs but also generate higher profits for organizations (14). In Iran, outsourcing is still in its early stages, particularly in the health sector, where awareness and experience regarding this phenomenon are limited. There has been no comprehensive assessment of the appropriate types of outsourcing contracts or the outcomes of outsourcing in units such as pharmacies (15).

## 2. Objectives

Therefore, this study aims to explore the specifications and qualifications of pharmacy outsourcing (drawbacks, strengths, etc.) within the framework of the "Family Doctor and Rural Insurance" program implemented by Iran's comprehensive health service centers.

## 3. Methods

This research was a qualitative study aimed at explaining the advantages, disadvantages, and corrective solutions for the family doctor program and rural insurance comprehensive health service centers in Iran.

To conduct the interviews, the snowball method and maximum diversity sampling were employed. The interviewees participated in the study after providing informed written consent. The most knowledgeable individuals were selected initially, and subsequent interviews were conducted with participants recommended by the first interviewee. The interviews lasted an average of 35 minutes, with a maximum duration of 50 minutes and a minimum of 20 minutes.

The criteria for participant selection included a minimum of three years of experience in the Family Doctor and Rural Insurance program, as well as sufficient knowledge of the program's processes. The key individuals who participated in the interviews included pharmaceutical affairs officials, network development management, and pharmacist personnel

working in the deputy health departments of the country's medical sciences universities.

Since qualitative studies do not have a fixed sample size criterion, sampling continued until data saturation was achieved—when no new information was obtained from additional interviews compared to previous ones.

In this research, semi-structured interviews were conducted using an interview guide to finalize the questions. The process began with invitations to three of the most experienced experts to participate in in-depth, face-to-face interviews regarding the family doctor program and rural insurance in Iran. With the participants' consent, their interviews were audio-recorded for further analysis, and notes were taken during the sessions. Coordination regarding the time and place of the interviews was established with both the participants and relevant authorities. A detailed explanation of the study's goals and the interview process was provided, followed by obtaining informed consent from the participants.

To accommodate the participants' convenience, the time and place of the interviews were agreed upon in advance, and notifications were provided through face-to-face consultation, Outlook, and electronic mail. During the interviews, the participants' voices were recorded with their explicit consent. After the interviews, the conversations were transcribed into written format, and a copy of the transcript was provided to the interviewee for confirmation and approval. Comments from the participants were discussed in a meeting with stakeholders and experts. To ensure the reliability of the extracted codes and themes, the agreement method between two coders was used, involving discussions to resolve any disputed cases.

The reliability and relevance of the collected data were determined using a Reliability Index, and the results were validated by applying four Lincoln-Guba criteria to evaluate the quality of the study outcomes. Several research colleagues reviewed the process to confirm the accuracy of the findings. To enhance the robustness of the study, repeated immersion in the data was undertaken by revisiting it multiple times, making necessary corrections in coding, and in some cases, recoding. Member checking was also employed to validate the findings.

For data analysis, framework (structural) analysis was used, a method commonly applied in health systems research and policy-making. This method involved five steps: Familiarization, determining the conceptual framework, indexing, charting, and mapping and analysis. The interviews were initially

**Table 1.** Interviewees' Demographic Characteristics

Descriptive Statistics Participants	No. (%)
<b>Gender</b>	
Female	12 (30)
Male	28 (70)
<b>Pharmacist/network development managers/pharmaceutical affairs managers</b>	
Pharmacist	18 (45)
Network development managers	11 (5.27)
Pharmaceutical affairs managers	11 (5.27)
<b>Age</b>	38.5 average
<b>Work experience</b>	14.5 average year
<b>Education</b>	
Bachelor	3 (7.5)
Masters	7 (5.17)
Ph.D	5 (5.12)
Pharmacist	18 (45)
General practitioner	7 (17.5)

**Table 2.** Advantages of Outsourced Pharmacies

Main Themes and Sub-themes	Frequency
<b>Quality</b>	
Increasing the quality of providing pharmaceutical services	7
Timely supply of required medical items	6
Improvement of technical supervision	5
<b>Optimal use of existing software systems</b>	
Registration of prescriptions in the electronic health insurance system	7
Using skilled and familiar forces with electronic systems	5
Accurate and timely registration of the entry and exit of drugs	4
<b>Management of financial resources</b>	
Reduce costs	6
Increase in profit	5

transcribed, coded, and grouped. After grouping, logical connections between the data were established using MAXQDA version 2022 software.

#### 4. Results

In the current study, the demographic information of 40 interviewees is provided, including details such as gender, educational qualifications, age, work experience, and education, as outlined in detail in [Table 1](#).

##### 4.1. Advantages of Outsourced Pharmacies

After analyzing the participants' responses, the benefits identified by the respondents included quality,

the use of software systems, and the management of financial resources, as shown in [Table 2](#).

##### 4.2. Disadvantages of Outsourced Pharmacies

After analyzing the participants' responses to the question, the disadvantages mentioned by the respondents included control and evaluation, the outsourcing process, and a lack of flexibility, as outlined in [Table 3](#).

##### 4.3. Operational Solutions to Improve the Provision of Outsourced Pharmacy Services

Operational solutions to improve the provision of outsourced pharmacy services: After analyzing the

**Table 3.** Disadvantages of Outsourced Pharmacies

Main Themes and Sub-themes	Frequency
<b>Control and evaluation</b>	
Challenges related to monitoring the contractor's contract	6
Lack of expert and technical force in the system to monitor and control the performance of the contractor	4
<b>Lack of flexibility</b>	
Long duration of outsourcing contracts	4
Change in the working conditions of the organization over time	4
Difficulty returning to pre-outsourcing conditions	3
<b>Outsourcing process</b>	
Limitations of choosing the right contractor	5
Failure to accurately predict and analyze overhead costs	3
Not up-to-date and non-compliance of the content of the contract with the new recipes	3

participants' responses, the main solutions are outlined in [Table 4](#).

Finally, the most important operational solutions to improve the provision of outsourced pharmacy services include identifying contractors with better performance, signing contracts with high-performing contractors, and conducting a test to assess the qualifications of personnel, with their approval managed by the pharmaceutical affairs department under the university's vice-chancellor of health.

## 5. Discussion

The results of the study indicate that the appropriate quality of service provision may be one of the advantages of outsourced pharmacies. This research aligns with the findings of Tourani et al. (as cited by Sarabi Asiabar) (16), Ravaghi et al. (17), Rezaee et al. (18), and Tan et al. (19). However, it does not align with the research conducted by the researcher and their team. The results of the researcher's study indicated that the outsourcing approach for pharmacies in rural healthcare centers might fail, despite its potential to improve the quality of care, including increasing patient satisfaction (20). The inconsistency could be attributed to the research population, as the researcher's study focused solely on rural health centers. Considering the appropriate quality of service provision in outsourced pharmacies, it is necessary for managers and policymakers to carefully evaluate these functions.

The findings of this research also showed that the proper use of software systems was one of the advantages of outsourcing pharmacies. Modern organizations view information technology as a critical organizational function (21). The outsourcing of organizational services has elevated information technology to a key strategy for increasing effectiveness,

reducing operational costs, and enhancing user satisfaction. When implemented correctly, this strategy can help establish a competitive edge within organizations, maintain that advantage, and provide better services at lower costs (22). Software systems have been effectively utilized in outsourced pharmacies. Incentive packages can be introduced to enhance the motivation of outsourced pharmacy employees and contractors.

The results also revealed that the correct management of financial resources could be an advantage of outsourcing pharmacies. Beaulieu et al. conducted a study in 2018 on the outsourcing of logistics in Canada's healthcare sector and concluded that service outsourcing is frequently adopted to improve performance and reform financial systems within the health sector. Proponents of this strategy argue that outsourcing fosters competition among service providers and creates economic incentives, thereby enhancing performance, advancing the health system's goals, reducing costs, and increasing revenue (23). To ensure proper financial resource management in outsourced pharmacies, it is essential to address and facilitate the factors that hinder the outsourcing process to ensure the stability and continuity of contractor activities.

The current research revealed that the lack of proper control and timely evaluation was one of the disadvantages of outsourcing pharmacies. The findings of Rezaee et al. are not consistent with the present study. In their study evaluating the experience of outsourcing health services at Tehran University of Medical Sciences, they concluded that control and monitoring standards directly influence the behavior of the private sector. Since supervisors prioritized physical structure and equipment standards, the private sector aligned its



**Table 4.** Operational Solutions to Improve the Provision of Outsourced Pharmacy Services

Row	Operational Solutions to Improve the Provision of Outsourcing Pharmacy Services	Frequency
1	Identifying contractors who perform better.	8
2	Contracts should be concluded every year with contractors who perform better.	7
3	Conducting a test to determine the qualifications of the forces and their approval by the pharmaceutical affairs of the university health department.	7
4	Emphasis on the use of pharmacists in contracts.	6
5	Accurate forecasting and analysis of costs related to rent, water, electricity and telephone according to the country's inflation rate and including them in contracts.	6
6	Announcing a wide-scale call for the participation of more private sector pharmacies.	6
7	Including instructions and sections related to pharmaceutical and family doctor affairs in the contract format.	5
8	Organizing a team to oversee contracts legally.	5
9	Continuous monitoring of outsourced pharmacies and applying legal tools (according to the contract) to improve processes and activities.	5

focus accordingly (18). An efficient health system is one that achieves more than the resources it consumes, while an ineffective system wastes resources relative to its outcomes. Control and evaluation are essential for the performance of a health system (24). Continuous monitoring, application of legal tools (in accordance with contracts), process improvements, and the involvement of pharmacists in contracts can significantly enhance the control and evaluation of outsourced pharmacies.

The results also indicated that the incompleteness of the outsourcing process was another disadvantage of outsourced pharmacies. In 2004, Hirschheim and Dibbern, in a study on the outsourcing of services at Indian universities, identified weaknesses in outsourcing, such as employing personnel with unrelated expertise, insufficient salaries, and long-term contracts (25). Considering the challenges and contract weaknesses identified in the above studies, organizing an expert team to monitor contracts from a legal perspective and announcing a wide-scale call for increased participation from private sector pharmacies could be effective steps toward improving the outsourcing process for outsourced pharmacies.

The findings of the present study also indicate that lack of flexibility in time was another disadvantage of outsourced pharmacies. Many studies, including those by Espino-Rodríguez and Padrón-Robaina and Mori, have demonstrated that outsourcing enhances flexibility; however, these findings are not consistent with the current research (26, 27). This discrepancy could be attributed to the research context, as none of the aforementioned studies focused on pharmacies. To address the inflexibility of outsourced pharmacies in time, it seems that signing contracts with newer contractors on an annual basis could help improve the flexibility of outsourced pharmacy services.

### 5.1. Conclusions

Considering that the purpose of service outsourcing is to improve conditions compared to those prior to outsourcing, officials and planners in this field should implement necessary interventions regarding the outsourcing mechanism and monitor its execution effectively. The lack of success in the outsourcing mechanism for pharmacies can be attributed to issues such as instability in management, insufficient familiarity of managers with methods for transferring services to the private sector, lack of authority among executive managers, overlapping managerial duties, slow decision-making processes, and, at times, a lack of commitment from managers at various levels (senior, middle, and executive) to engage with the private sector.

Although outsourcing is intended as a mechanism to achieve optimal performance and improve service quality, it appears that factors such as the type of services being outsourced, the implementation methods, and the continuous evaluation and monitoring of outsourced units should be prioritized by managers. These factors play a critical role in ensuring the success of the outsourcing process.

To enhance the provision of services by outsourced pharmacies, it is essential to utilize the expertise of specialists (pharmacists) in designing and finalizing contracts. Additionally, a wide-scale call should be announced to encourage greater participation from private sector pharmacies.

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## Footnotes

**Authors' Contribution:** E. M.: Study design, data collection, writing the proposal; V. Y. F., S. N., and M. N.: Assistance in the preparation of the manuscript; H. G.: Data collection; S. B. F. and M. B.: Data analysis, manuscript preparation, supervision; All authors have read and approved the final draft of the manuscript.

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**Data Availability:** The datasets generated and code used for the analysis are available from the corresponding author upon reasonable request.

**Ethical Approval:** This research has been approved by the Ethics Committee of Abadan University of Medical Sciences with the number "IR.ABADANUMS.REC.1401.104". All the protocols of this study are in accordance with the ethical guidelines of the announcement.

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