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# A critical analysis of Iran health system reform plan

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## Abstract:

**INTRODUCTION:** Iran's Health System Reform Plan (HSRP) were initiated in public and hospitals affiliated to Medical Sciences Universities in June 2015. The purpose of the present paper is to provide a critical analyse of the HSRP and its outcomes.

**METHODS:** The study was carried out as a review critical analyse in 2019. The pertinent articles were searched for in Science Direct, PubMed, Ovid, and Google Scholar using keywords "health sector," "reform plan," "health system reform," "health services," "health care system," and "Iran." Published articles in scientific national and international journals in Persian and English language, of which the full-texts were available, were entered into the study. Finally, from a total of 75 articles obtained, 45 studies were carefully reviewed.

**RESULTS:** Several factors, which impact in the success of Iran's HSRP such as social-economic and political outlooks, lack of official information and a comprehensive management system, in addition to failure to extend continuous performance control, economic sanctions against Iran. Other factors are limitations on financial transactions between Iran and the rest of the world due to the sanctions, relying merely on a few instructions, and negligence of the required infrastructures. In terms of advantages of the plan, relative decrease in patient's share in medical expenses, improvement of emergency wards, and relative decrease in the rate of C-section operations are notable.

**CONCLUSION:** Better implementation of Iran's HSRP entails the provision of resources and facilities such as stable and adequate resources, proper management of available resources, payment mechanisms reform, attracting, and facilitating private sector's participation.

## Keywords:

Health care reform, health services, health system, Iran

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## Introduction

Health is one of the main axes of sustainable development and improvement of quality of life in all countries. In this regard, the World Health Organization (WHO).<sup>[1]</sup> Maintains that access to the highest health standards is the right of everyone. According to the WHO, countries are required to codify, plan, and implement their health program according to the international and regional indices.<sup>[2]</sup> Health in society is guaranteed through the realization of social development conditions and the provision of public health and

hygiene services.<sup>[3]</sup> Attempts to alleviate injustice in access to health services are common in most countries.<sup>[4]</sup>

The Health System Reform Plan (HSRP) has been implemented in 21 countries (e.g., Turkey, the UAE, Chili, Kosovo, India, Ghana, Kenia, Indonesia, Mali, Nigeria, Rwanda, South Africa, China, Philippines, Mexico, Vietnam, and Iran) over the past 15 years. All of these countries have tried to improve their public health coverage level, especially in less developed districts.<sup>[2]</sup> The main objective of HSRP is to provide preventive services, improve and upgrade the quality of therapeutic-care services, empower health and treatment systems,

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improve health conditions, respond to the needs of the public and society.<sup>[5]</sup> Solve financial problems of health services providers and insurance companies, and improve management structures.<sup>[6]</sup> Health injustice means inequality in the provision of facilities and access to health services for different social groups.<sup>[7]</sup>

The program for reforming the health-treatment system in Iran was prepared before the 1979 revolution and it was implemented by health officials afterward.<sup>[3,8]</sup> However, Iran's position in terms of some of the health indices has not been satisfactory, comparing countries in the Middle East and Asia. For instance, the response rate in the Iran health system was 67% for outgoing services and 73% for hospitalized services, which were less than Brazil and 14 European countries (>81%).<sup>[9]</sup> In addition, 70% of medical costs were paid by the patient, and on average and the heavy load of medical costs would take 7% of the Iranian population under the poverty threshold each year.<sup>[10]</sup>

This high rate of out-of-pocket payment was despite the goals 4<sup>th</sup> 5-years Development Plan, which requires that only 30% of medical costs should be paid by patients.<sup>[11]</sup> Threats such as aging population, increase in care and health service costs, failure to control noncommunicable diseases, increase in the prevalence of physical, mental, and social diseases, In addition, factors like poor access to therapeutic service in less developed centers, higher demand for paraclinical and unnecessary services, low satisfaction with the services, increase in out-of-pocket payment were among the main challenges in the way of state officials.<sup>[8]</sup> On the other hand, public's expectations for safety and justice of care is increasing.<sup>[12]</sup> In light of these, Health System Outlook (2025) was introduced.<sup>[13]</sup> The present paper uses the published documents and articles in this area to analyse Iran HSRP eight packages [Table 1] and shed light on the advantages and challenges of it.

## Methods

The study was conducted as a comprehensive review study in 2019. The relevant papers were searched in

**Table 1: Eight packages of Iran health system reform plan**

Decrease the out of pocket payment by patients hospitalized in public hospitals
Incentivize Physicians to stay and work in less developed areas
presence of specialists in the hospitals associated with the ministry of health with more than 64 beds
Improve the quality of hoteling
Improve the quality of patient visit services in published hospitals
Promote natural child delivery
Providing financial support for patients with hard to cure and special diseases
Providing air ambulance services

Science Direct, PubMed, Ovid, and Google Scholar, IranMedex, Google, SID, Magiran with a time range limit from 2014 to 2019. The keywords used in the search were "health, health sector, reform plan, health system reform, health services, care system, and Iran." Papers published in Farsi and English in international scientific journals of which the full-text or a summary was available were entered in the study. Reports and documents published by Iran Ministry of Health, Treatment, and Medical Education were also included. Papers in the form of a letter to editor, case study, personal vision, and editorial papers were excluded. Totally out of 75 articles, 45 remained in the study based on detailed examinations [Figure 1].

## Results

It is not easy to assess and evaluated a plan like (HSRP) which has only been implemented for a short period of time. Still, this study was carried out based on the studies conducted in this area and the official report by the state.

### Out-of-pocket payment by the public

Decreasing the patient's share in medical costs is one of the main elements in programming and designing health policies in most of the countries.<sup>[14]</sup> In addition, 150 million individuals live in extreme poverty due to medical costs. Of these, 100 million individuals have been forced to live under the poverty threshold.<sup>[1]</sup>

Health policymakers in Iran decided to decrease the out of pocket payment by patients, according to their

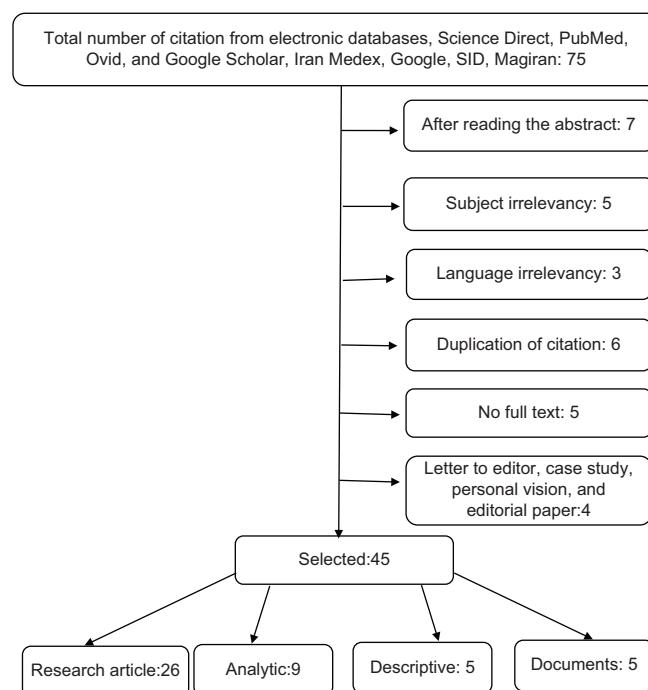


Figure 1: Study selection flow chart

goals, only 10% and 5% of hospital bills in urban and rural (including cities with <20 thousand population) areas, respectively, should be paid by patients. Early assessments revealed that this plan was effective in decreasing the out of pocket payment so that the plan was a success.<sup>[15,16]</sup> However, after the implementation of HSRP, the out-of-pocket payment was decreased to 50%.<sup>[17]</sup> Studies in Iranian cities Uromieh, Kurdistan, and Yazd showed that this aspect of HSRP (less out-of-pocket payment) was the main cause of satisfaction in the public so that the respondents were satisfied with the expenses of medical services.<sup>[9,18,19]</sup> However, the plan was later faced with challenges mostly due to heavy financial load on the government, changes in insurance contracts, and hospital expenses.<sup>[15,16]</sup> According to the Islamic Republic of Iran National Research Institute, after 2 years since the commencement of plan, direct payment by Iranian households for health services was 5.34%, while based on the WHO computation method, payment capacity by households should be 7% at most. This means that Iranians have paid a large portion of medical expenses out of pocket.<sup>[20]</sup>

The main reasons for the large share of out-of-pocket money paid by patients are inefficiency of health insurance systems, tight budget of health sector comparing with the national budget, and the general budget deficit of the government.<sup>[1]</sup> Experts believe that there are obstacles in the way of successful implementation of the plan. Among many, the structure and condition of the Iran health system are notable. Implementation of the plan needs to take into account factors like the provision of equipment, personnel, and financial resources.<sup>[21]</sup> Unfortunately, the sanctions against Iran and poor economy thwart finding a reasonable solution for this being found. Another obstacle in the implementation of the plan is informal payments. That is, the providers of health services receive money from informal channels.<sup>[22]</sup>

Among the reasons for informal payments and in turn high out-of-pocket payment are patients' demand for better care services,<sup>[23]</sup> Physicians trying to lure patients into private clinics,<sup>[24]</sup> and the concerns about health personnel's lack of motivation to provide quality health services or about nonstandard care.<sup>[25]</sup> Such informal payments deprive others with less revenue from quality health services, widen the social class gap, affect the social image of Physicians, and destroy the patient–nurse relationship.<sup>[26,27]</sup>

### **Motivating Physicians to work in under-developed regions and improve quality of care**

This plan was an attempt to eliminate bribery in under developed regions and provide better access to general and specialized services through increasing the revenue of Physicians who work in such regions.

The plan, however, is not free of drawbacks as after the implementation, the patients' satisfaction decreased notably, mainly in areas of timely visit, hoteling, and observance of religious and ethic codes. The main reason for this was the lack of human infrastructures and unsupportive environment.<sup>[28]</sup> while Physicians' income increased through the plan, the nurses' income remained almost unchanged. In practice, however, nurses provide 80% of primary health-care services and their dissatisfaction surely takes its toll on the quality of care and observance of standards.<sup>[29]</sup> Patients thronging public health facilities while these facilities are not equipped to support the increasing demand was one of the main causes of dissatisfaction of nurses with their salary.<sup>[18,24,28]</sup> Limitations on recruiting new personnel and nurses, which are still in place, added to the complexity.<sup>[6]</sup> Given the excessive increase in the workload, nurses demand a higher salary and welfare, along with just and equal organizational promotion.<sup>[30]</sup>

### **Natural childbirth promotion plan**

According to the WHO's instruction for all countries, C-section rate in no region should pass 10%–15%.<sup>[31]</sup> According to the statistics published by the Health Office of Iran Ministry of Health, out of 1.3 million childbirths in 2011, 53% were C-section and 47% were natural childbirth. This is a worrying report. In addition, in 2010, the WHO reported that with C-section constituting 41.3% of total childbirths, Iran is the second country in the world that uses this method of childbirth.<sup>[32]</sup> The main reasons for this are higher education of mothers, mothers' fear, desire to give birth to the child in a private hospital, history of C-section, and recommendation by physician.<sup>[33]</sup>

In light of these statistics, this part of the health plan was aimed at improving mother and infant's health through painless and free of charge childbirth and lowering the rate of C-section childbirth.<sup>[34,35]</sup> According to this plan, the rate of C-section operations in public and private hospitals should be decreased by 10% and 16% of total childbirths, respectively.<sup>[36]</sup> Providing free of charge natural childbirth service, requiring private hospitals to perform more natural childbirth especially for first childbirth, providing painless childbirth facilities, providing free education and pregnancy and post childbirth exercises, and preparing mothers for natural childbirth in eight sessions are some of the steps taken by health centers.<sup>[37]</sup> Following the implementation of this plan, 14% reduction in the number of C-section operations was reported in one province. This means that the plan has even exceeded its goal (10% reduction).<sup>[9,32,38]</sup> Reports from other countries after implementing the plan for several years however, indicate that achieving the goal (10% reduction) is not that easy. Providing better access to pregnancy services and social educations

through the mass media can change Iranian mothers' attitudes about C-section.<sup>[21]</sup>

### Providing air ambulance services

Iran is the 10<sup>th</sup> country in the world and 6<sup>th</sup> country in Asia in terms of road accidents. This indicates the need for the air ambulance. For example, about nine thousand heavy casualty accidents have happened in Iran in the year. In light of this, Iran Ministry of Health has started programs to develop air ambulance services as a part of HSRP packages. After providing the funding, 14 helicopters were prepared through cooperation with the Army. About one-third of the country is within 150 km radius of air ambulance services. The remaining two-thirds is expected to be covered by the air ambulance service within 2 years.<sup>[39]</sup> Finally, despite the remarkable achievements in implementing a health transformation plan such as reducing pay out of pocket, managers have many problems in this area.<sup>[40]</sup> Based on a few studies, the Iranian Aviation Emergency Services Development Plan should be revised. Formulation of national standards and regulations is recommended to address safety concerns and reduce the high cost of the program.<sup>[41]</sup>

### Discussion

The potential health transformation plan can have positive effects, but the main condition is Factors that, as weaknesses and threats, affect the proper implementation of this plan, should be minimized. If the potential or actual factors of the strengths and opportunities of this project are not seriously implemented, all aspects of treatment, research, and medical education will be severely negatively affected.<sup>[42]</sup>

There are several factors effective in the success or failure of Iran HSRP, such as social-economic and political outlooks. In Iran, due to the lack of concern for the necessity of improving primary care services, the cost of HSRP increased excessively, so the plan can lead to failure if no corrective measure is taken. Although primary cares are properly provided in rural areas of Iran, in general, this area of care services is neglected in Iran so that treatment is more important than prevention. This is the Achilles' Heel of the HSRP. The weight of quality relative to quantity of health services is another determinant of success or failure of the plan.<sup>[2]</sup> HSRP has managed to improve the status of lower-income strata in terms of both out-of-pocket payments and catastrophic health expenditure. This improvement has been more prominent in rural areas than urban areas. The implementation of this plan, by reducing the cost of inpatient services in public hospitals, has prevented households from experiencing the "abrupt" poverty situation, usually resulting from surgery operation.<sup>[43]</sup>

In addition, harsh economic sanctions against Iran is one of the major obstacles in the way of implementing HSRP. Although it is said that the sanctions do not include foods and medicines, the limitations on financial transactions between Iran and the rest of the world and lack of financial resources due to the sanctions have led to medicines shortage in Iran health system and decrease in the quality of medicines produced in Iran and used in medical service in return. The increase in the cost of medicines has negatively affected the people's health.<sup>[44]</sup> Of the serious threats to HSRP are economy and international issues.<sup>[45]</sup>

Another factor is the heavy costs that may be caused by behavioral changes in the society so that people's expectations of the health system might be increased and, in turn, catastrophic health care expenditures will be inevitable. This might lead to the failure of the plan in the long run. The absence of a roadmap is one of the causes of poor results of the plan. That is, the plan is implemented based on a few instructions, while it needed scientific works normally done before implementation of a national plan (e.g., determining outlooks and goals and surveying status quo).<sup>[46]</sup> The plan has shortages in terms of preparation of the ground (hardware and software) and the provision of facilities like space and equipment. For instance, many health centers lack services like sonography and send patients to other centers. Negligence of the low income of nonphysician personnel and nurses in particular who deal with the main load of the plan is another major challenge. While the plan has increased Physicians' revenue, the rest of the personnel have experienced nothing but an increase in their workload. Lack of adequate supervision by the state and other authorities on the quality and quantity of Physicians' work is another executive problem. In addition, the plan is out of proportion with the structure and organization of health centers including urban and rural centers so that the infrastructure is not suitable for providing the services required by the plan.<sup>[47]</sup> In the absence of the required infrastructures like the latest technology and updated laws adjusted to the social and economic condition of the country, the plan is doomed to fail.<sup>[48,49]</sup> Inequality between physician's income and the income of the rest of medical personnel is another hurdle.<sup>[50]</sup>

### Limitation and innovation

One of the limitations of this study was the impossibility of access to some experts and key individuals, in the implementation of the Health Transformation Program in Iran. Lack of access to some accurate documents and statistics of the Ministry of Health and Medical Education of Iran, as well as gray literature, a relatively small number of studies conducted on the implementation of the Health Transformation Plan in Iran, were other

limitations of this study. On the other hand, the strength of this study is that it is comprehensive. Because in this study, the information and documents of the Ministry of Health and Medical Education in Iran about the health transformation plan were carefully examined.

## Conclusion

Better implementation of Iran's HSRP entails the provision of resources and facilities such as stable and adequate resources, proper management of available resources, payment mechanisms reform, attracting and facilitating private sector's participation.

Successful implementation of HSRP in Iran needs resources and equipment including accumulation of adequate and stable resources and efficient management and measures like payment mechanism reform, improvement of quality of service, improvement of clinical governance, planning in the areas of disease prevention, promotion of private sector participation in particular, and last but not least, cooperation between different sectors and winning the trust of key organizations.

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## Conflicts of interest

There are no conflicts of interest.

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