



# Iran's Health Transformation Plan; Main Issues and Opportunities for Improvement: A Systematic Review

*Shabnam Ghasemyani*<sup>1</sup>, *Samira Raofi*<sup>1</sup>, *Hadi Hamidi*<sup>2</sup>, *\*Rahim Khodayari-Zarnagh*<sup>3</sup>

1. Department of Health Services Management, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran
2. Department of English Language, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran
3. Tabriz Health Services Management Research Center, School of Management and Medical Informatics, Tabriz University of Medical Sciences, Tabriz, Iran

\*Corresponding Author: Email: rahimzarnagh@gmail.com

(Received 16 Sep 2021; accepted 19 Dec 2021)

## Abstract

**Background:** The Health Transformation Plan (HTP), as the latest reform of Iran's health system, has been implemented gradually in several phases to facilitate the achievement of universal health coverage. We aimed to identify the achievements and challenges of the HTP from the beginning of its implementation in Iran health system.

**Methods:** In this qualitative systematic review, English papers were searched in PubMed, Scopus, Web of science, and Google Scholar search engines in addition to Persian databases such as Magiran and SID from 2014-2020. The Mixed-Methods Appraisal Tool (MMAT) checklists were used to assess the quality of the studies. Study selection, quality assessment, data extraction, and data analysis were done independently by two people. For analyzing the data, the Framework Analysis Method, based on the health system function framework of the WHO, was used.

**Results:** Overall, 32 papers were included based on the inclusion criteria. The results were divided into four main themes: stewardship, financing, resource generation and service delivery, and 20 sub-themes in the form of achievements and challenges. Regulatory and standardization, service packages, medical equipment and supplies, and the quality of health services were more repetitive. Considering the challenges of HTP, purchase process, motivational factors, and health services capacity were more repetitive.

**Conclusion:** The administrative challenges in the implementation of the HTP have prevented the sustainability of the outcomes and their main goals. The use of strategic dynamic planning, anticipating sustainable financial resources, and strengthening the monitoring mechanisms could lead to further achievements.

**Keywords:** Health transformation plan; Achievements; Challenges; Systematic review; Iran

## Introduction

The Health Transformation Plan (HTP) as the latest reform of Iran's health system (1) was noti-

fied to the medical universities on May 5, 2014 (2, 3) to facilitate access to universal health coverage,



Copyright © 2022 Ghasemyani et al. Published by Tehran University of Medical Sciences.  
This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International license.  
(<https://creativecommons.org/licenses/by-nc/4.0/>). Non-commercial uses of the work are permitted, provided the original work is properly cited

financial protection of households, ensure justice in access to health services for the society members and efficiency of the health system. HTP has been implemented gradually in several different phases (4). The first phase of the program, which focused mainly on the medical care, was implemented in May 2014, including reducing out-of-pocket payments, supporting the physicians' retention in deprived areas, and promoting natural vaginal delivery, Specialist residency program, Quality Improvement Package of Outpatient Visit, financial protection to patients with incurable illness and hospital hoteling services were also taken into account (5). The second phase of the HTP with eight programs, emphasizing on the development of PHC and family physician program, was implemented in Aug 2014. In Feb 2015, the third step of the HTP, with emphasis on the modification of medical tariffs, establishment of a control system for informal payments, reform of the payment system, and the book on the relative value of health services was continued (6).

Various studies have been conducted on the achievements and challenges of the HTP, reporting different and contradictory results. Items such as expanding the capacity to provide health services, reducing informal payments, reducing out-of-pocket payments, reducing patients' referrals to purchase drugs and consumables/equipment, developing insurance coverage and staff satisfaction are mentioned as the achievements of the HTP (7-10). In contrast to the weakness in policy-making and targeting, centralized health systems, lack of proper forecasting of funding and dependence on government budgets, lack of attention to referral systems, weakness monitoring and evaluation mechanisms, overall increase in health system costs, bankruptcy of insurance companies and decrease in service quality are among the challenges of the plan during the six years of the implementation (11-13).

However, a study that comprehensively examines the achievements and challenges of the HTP has not been conducted so far. To strengthen the understanding of the performance of health sys-

tems, evaluating the performance of the health systems by identifying the achievements and challenges seems necessary to provide the basis for the effective reforms in the health system. A careful look at the dimensions and scopes of the HTP shows that this framework can be a good instrument for strategic analysis of this plan. Therefore, we aimed to identify the achievements and challenges of the HTP from the beginning of the implementation until the present by the WHO framework.

## Methods

This study was conducted using a systematic review approach from May 5th, 2014 (beginning of the HTP) to the end of Jun 2020 in PubMed, Scopus and Web of Science international databases, Google Scholar search engine, and Persian databases including Magiran and SID. To identify related studies that may we also searched references listed in the studies (source by source). An example of a search strategy for the PubMed database is as follows:

("health system reform" OR "health reform" OR "health sector evolution plan" OR "health transition" OR "health transition plan" OR "health transformation" OR "health transformation plan") AND (Iran)

In this review, certain studies were included: 1) studies published in English or Persian language, 2) Studies that are qualitative or mixed-methods, 3) studies published between May 5, 2014 and the end of June 2020, and 4) studies that focus on achievements, Issues, challenges and opportunities of the Iranian HTP with qualitative approaches. Exclusion criteria included quantitative studies and non-original papers.

All papers were imported to EndNote (V. X9), and then duplicates were removed. The data extraction table included the following items: the first author, year of publication, place of study, type of study, number of participants, and main findings of the study. Two authors extracted the data independently, and agreement was reached by discussion.

After the preliminary selection process by the first reviewer and checking by the second reviewer, the duplicate studies were removed, and the two reviewers independently screened the titles, abstracts, and full texts of the articles on competency criteria. After resolving the discrepancies by the third researcher, the study data was based on the author's name, year of publication, research community, type of study, and achievements and challenges of the HTP were extracted. The MMAT checklist was used to appraise the quality of the papers (14). The checklist included two screening questions regarding the clarity of the research question and data collection. After that, five questions about the statistical population and the research sample, sufficient number of samples, lack of bias in the data collection, appropriateness of data collection tools, and their accurate statistical analysis were asked. The way of scoring them was in the format of "yes, can't tell, no" appraised based on qualitative research and mixed-methods studies.

The framework analysis was used to analyze the data. The findings of each study were divided into significant units as codes. The codes were then categorized, according to their similarities and differences, into subcategories and categories.

The results of the study were analyzed according to the four main functions of the WHO framework and were classified into four main themes and 20 sub-themes on achievements and challenges as follows.

### Ethics Approval

This study was approved by the Ethics Committee of Tabriz University of Medical Sciences (IR.TBZMED.REC.1400.1030).

### Results

The search yielded for the studies has been summarized in Fig. 1. Out of 652 potentially relevant studies reviewed, 32 articles were included in this systematic review. The studies were divided into three categories based on the quality of reporting using MMAT checklists of items as follows: 14 studies (43.75%) had high quality, 10 studies (31.25%) had intermediate quality, and eight studies (25%) had low quality. According to the WHO framework, four main themes of results were extracted, including stewardship, financing, resource generation, and service provision (Table 1,2).

**Table 1:** Achievements of Health Transformation Plan

<i>Stewardship</i>					
Policymaking		Intra-sectoral governance		Intra-sectoral leadership	
Planning	Evidence-based decision making	Insurance Communications	Inter -sectoral communications	Regulation and standardization	Monitoring and evaluation
<ul style="list-style-type: none"> <li>• Implementation of standard protocols</li> <li>• Accurate and comprehensive planning</li> </ul>	<ul style="list-style-type: none"> <li>• Creating a platform to provide national and regional evidence</li> <li>•Utilization of scientific evidence</li> </ul>	<ul style="list-style-type: none"> <li>•Increasing interactions between hospitals and basic insurance organizations</li> </ul>	<ul style="list-style-type: none"> <li>• Providing legal support for the continuation of the HTP</li> <li>• Paying attention to the role of health in the development</li> <li>• Active participation of all stakeholders</li> <li>•efficient inter-sectoral communications</li> </ul>	<ul style="list-style-type: none"> <li>• Re-engineering the regulations of insurance transactions</li> <li>• Supporting the retention of physicians in deprived areas</li> <li>• Promoting natural childbirth</li> <li>• visit quality improvement package</li> </ul>	<ul style="list-style-type: none"> <li>•Continuous monitoring</li> <li>•Increasing Monitoring and remote monitoring</li> <li>•supervisory structure of basic insurance organizations</li> <li>•Increasing the monitoring of the performance of physicians</li> </ul>
Financing					
Collecting		Pooling		Purchasing	

Insurance organizations	Sustainability of financial re-sources	Integration of insurance funds	pooling process	benefit package	Service purchase process
<ul style="list-style-type: none"> <li>•Supporting the quantitative and qualitative development of insurance</li> <li>•Strengthening the regulatory role of public and private insurance</li> <li>• paying attention to the role of insurance in financing</li> </ul>	<ul style="list-style-type: none"> <li>• Supporting cross-sectoral institutions in financing</li> <li>• making legal provisions related to tax increases to health</li> <li>•Increasing the role of charities in financing</li> </ul>	<ul style="list-style-type: none"> <li>• Establishing resource integration and legal protection</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing organizational capacity by resource management</li> <li>• Using more scientific evidence in resource management</li> </ul>	<ul style="list-style-type: none"> <li>•Increasing the number of people covered by health insurance</li> <li>•Reducing out-of-pocket payments and catastrophic health expenditure</li> <li>•Providing comprehensive health services</li> <li>•Attention to low-income and incurable patients</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthening the role of the MOHME as a service purchaser</li> <li>•Strengthening strategic purchasing</li> </ul>
<p>Resource generation</p> <p>Human resources</p> <p>Availability</p> <ul style="list-style-type: none"> <li>•Eliminating the shortage of manpower in the public sector</li> <li>•Presence of a resident specialist</li> <li>•Implementation of the full-time physician plans.</li> </ul>	<p>Motivational factors</p> <ul style="list-style-type: none"> <li>•Motivating health care forces</li> <li>•Increasing Staff satisfaction</li> <li>•Supporting the retention of physicians in deprived areas</li> <li>•Passing the productivity promotion of nurses</li> <li>•Expanding the employment opportunities</li> </ul>	<p>Capacity building</p> <ul style="list-style-type: none"> <li>•Utilization of scientific and educational capabilities</li> <li>•Educational transformation plan</li> <li>•Empowering health managers</li> </ul>	<p>Physical</p> <p>Medical equipment and information technology</p> <ul style="list-style-type: none"> <li>• Optimization of pharmaceutical and medical equipment management</li> <li>•Increasing the number of hospital beds</li> <li>•Strengthening the information system</li> </ul>	<p>Facilities and buildings</p> <ul style="list-style-type: none"> <li>•Construction of new medical centers and improving the quality of hoteling services</li> <li>•participation of charities in the construction of physical space</li> </ul>	
<p>Service Provision</p> <p>Capacity of health service</p> <ul style="list-style-type: none"> <li>•Completing the development of the health care network</li> <li>•Expanding the coverage of emergency air services</li> <li>•Meeting the specialized and sub-specialized needs of the community</li> <li>•Increasing bed occupancy</li> <li>•Variety in providing prevention, screening and rehabilitation service</li> </ul>		<p>Access</p> <ul style="list-style-type: none"> <li>•Public access to services</li> <li>•Providing services for poor and suburban's residents</li> <li>•Increasing the access of incurable patients</li> </ul>			<p>Quality of service</p> <ul style="list-style-type: none"> <li>•Improving responsiveness</li> <li>•Reducing patients' complaints</li> <li>•Following-up patients for effectiveness of services</li> <li>•Improving health literacy</li> <li>•Improving the health service indicators</li> </ul>

**Table 2:** Challenges of Health Transformation Plan

<i>Stewardship</i>					
Inter-sectoral leadership		Intra-sectoral governance		Evidence-based decision making	Policy planning
<p>Inter -sectoral communications</p> <ul style="list-style-type: none"> <li>•Ignoring some stakeholders</li> <li>•Insufficient infrastructure</li> <li>•Lack of attention to the capacities of the private sectors</li> </ul>	<p>Insurance Communications</p> <ul style="list-style-type: none"> <li>• Increased conflicts between insurance organizations and hospitals</li> </ul>	<p>Monitoring and evaluation</p> <ul style="list-style-type: none"> <li>•Lack of experienced personnel for evaluation</li> <li>•Weak monitoring and evaluation mechanisms</li> </ul>	<p>Regulation and standardization</p> <ul style="list-style-type: none"> <li>•Creating induced demand</li> <li>•Lack of transparency in the tariff</li> <li>•Lack of compilation of clinical guidelines</li> <li>• Parallel service delivery structures</li> <li>•Lack of competition between healthcare providers</li> </ul>	<p>Evidence-based decision making</p> <ul style="list-style-type: none"> <li>•Weakness in evidence structure at the local level</li> <li>•High authority of the university board of trustees</li> </ul>	<p>Policy planning</p> <ul style="list-style-type: none"> <li>•Weakness in the planning process</li> <li>•Accelerated implementation and lack of small-scale pilot</li> <li>•Centralized decision-making system</li> <li>• Conflict of interest in policy-making</li> <li>•Inability to maintain the stability of the plan outcomes</li> </ul>
<p>Purchasing</p> <p>Service purchase process</p> <ul style="list-style-type: none"> <li>•Lack of strategic purchasing</li> <li>•Unrealistic increase of tariffs</li> <li>•Reducing the liabilities of insurance companies</li> <li>•Increasing the cost of medical equipment</li> <li>•Prolonging the process of payment claims and increasing debts</li> </ul>	<p>benefit package</p> <ul style="list-style-type: none"> <li>•A treatment-oriented perspective in the MOHME</li> <li>•Inadequacy of the benefit package</li> </ul>	<p>Pooling process</p> <ul style="list-style-type: none"> <li>•Non-transparent financial flows</li> <li>•Lack of an institution responsible for integrated resource pooling</li> <li>• Incompatibility of a new financial system with the HTP</li> </ul>	<p>Financing</p> <p>Pooling</p> <p>Integration of insurance funds</p> <ul style="list-style-type: none"> <li>•Lack of integration of insurance funds</li> <li>•Weak regulations concerning the integration of insurance funds</li> </ul>	<p>Sustainability of financial resources</p> <ul style="list-style-type: none"> <li>•Unstable financial resources and resource allocation based on bargaining power</li> <li>•Lack of timely and unfair budget allocation</li> <li>•dependence of the health insurance on the government budgets</li> <li>•increasing Liabilities of insurance companies</li> </ul>	<p>collecting</p> <p>Insurance organizations</p> <ul style="list-style-type: none"> <li>•Increasing the financial burden and budget deficit</li> <li>•Overlap of insurance coverage's</li> <li>•Complex process of document handling</li> </ul>
<p>Facilities and buildings</p> <ul style="list-style-type: none"> <li>•Impossibility of physical development of hospitals</li> <li>•Lack of facilities for patient companions</li> </ul>	<p>Physical Resources</p> <p>Medical equipment and information technology</p> <ul style="list-style-type: none"> <li>• Lack of development of health technology assessment</li> <li>•Insufficient infrastructure</li> <li>•Lack of proper supply chain management</li> <li>•Inefficiency of the health information system and lack of electronic records</li> </ul>	<p>Capacity building</p> <ul style="list-style-type: none"> <li>•Weakness in the selection and development of managers</li> <li>•Lack of preparation of personnel</li> <li>•Inadequate training of service providers</li> </ul>	<p>Resource generation</p> <p>Capacity building</p> <ul style="list-style-type: none"> <li>•Weakness in the selection and development of managers</li> <li>•Lack of preparation of personnel</li> <li>•Inadequate training of service providers</li> </ul>	<p>Human resources</p> <p>Motivational factors</p> <ul style="list-style-type: none"> <li>•Discrimination and delays in payments</li> <li>•Decreasing motivation and satisfaction</li> <li>•Insufficient attention to employees' needs and increased expectations</li> <li>•Lack of job security in nurses</li> </ul>	<p>Availability</p> <ul style="list-style-type: none"> <li>•Insufficient staff skills</li> <li>•low productivity of human resources</li> </ul>

	Service Provision	
Quality of health service	Access	Capacity of Health service
<ul style="list-style-type: none"> <li>• People's dissatisfaction with some aspects of the plan</li> <li>• Increased waiting lists</li> <li>• Increasing the level of patients' expectations</li> <li>• Decreased service quality</li> </ul>	<ul style="list-style-type: none"> <li>• Weakness in achieving Universal Health coverage</li> <li>• Problems with accessing to health services</li> <li>• Lack of social services</li> </ul>	<ul style="list-style-type: none"> <li>• Increased workload</li> <li>• Lack of capacity in medical settings</li> <li>• Gap in referral systems and family physician programs</li> <li>• Low attendance of physicians in public hospitals</li> </ul>

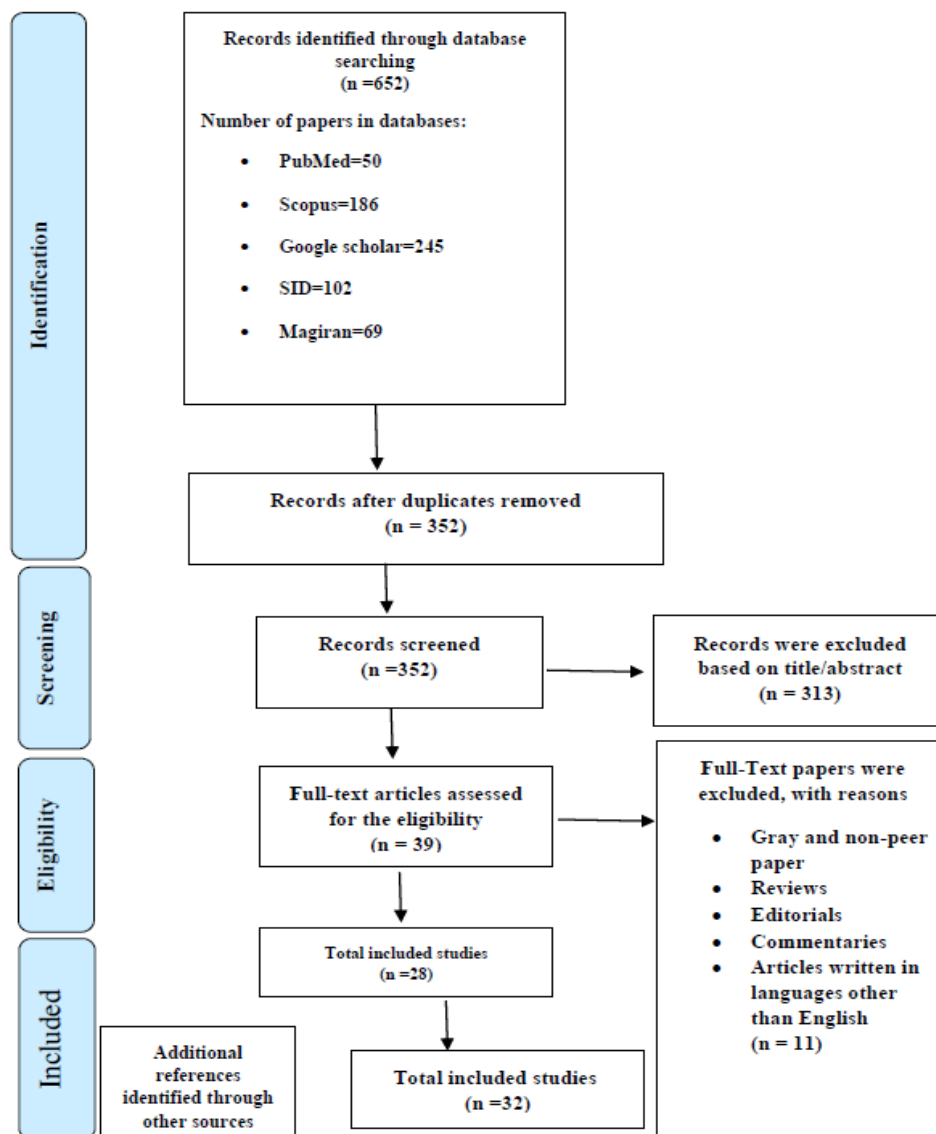


Fig. 1: Flow diagram of our review process (PRISMA)

## ***A) Stewardship***

### ***A-1) Policy making***

#### ***A-1-1) Planning***

Achievements: The existence of standard protocols, precise planning for the implementation, continuous improvement of planning and providing private sectors' participation are the achievements (9).

Challenges: Fundamental problems such as a centralized approach to planning, lack of comprehensive planning, weakness in setting goals and not implementing the plan as a pilot program, conflict of interests in policy-making, and inability to maintain the results of the HTP have been the challenges in planning (6, 7, 12, 15).

#### ***A-1-2) Evidence-based decision making***

Achievements: Utilizing the existing scientific evidence and creating a platform for the production of national and local evidence in the implementation is one of the achievements (16).

Challenges: in contrast to the power of board of trustees, inappropriate use of scientific evidence and weakness in strengthening the structure of evidence production at the national level is one of the most frequent weaknesses of evidence-based decision making (7, 12).

### ***A-2) Inter-sectoral governance***

#### ***A-2-1) Inter-sectoral communications***

Achievements: Paying attention to the role of health in the country's development, employing efficient personnel, active participation of stakeholders, and legal support for the continuation of the HTP are of the positive points (17, 18).

Challenges: In contrast to ignoring some stakeholders, lack of adequate infrastructure and lack of attention to private sectors' capacity are some of the challenges (6, 11, 15).

#### ***A-2-2) Insurance communications***

Achievements: Increasing interactions between hospitals and basic insurance organizations were among the achievements of insurance communications (19).

Challenges: in the face of numerous conflicts between hospitals and insurance organizations, it

was one of the challenges that made the implementation of the plan difficult (20).

### ***A-3) Intra-sectoral leadership***

#### ***A-3-1) Regulation and development of standards***

Achievements: Developing standards related to promoting the natural vaginal delivery and reducing cesarean section, supporting the retention of physicians in deprived areas, reforming medical tariffs, and re-engineering the regulations of insurance transactions are among the recurring achievements (21, 22).

Challenges: Issues such as induced demand, failure to develop clinical guidelines, and lack of transparency in the tariff review process have been challenges in the implementation of the HTP (21, 22).

#### ***A-3-2) monitoring and evaluation***

Achievements: Continuous monitoring, absentee supervision, improving the supervisory structures of basic insurers, and full supervision are among the achievements (23).

Challenges: In contrast, the lack of experienced personnel for evaluation, lack of adequate supervision, and weakness in evaluation mechanisms are among the negative aspects of this dimension (7, 12).

## ***B) Financing***

### ***B-1) Collecting***

#### ***B-1-1) Insurance organization***

Achievements: Supporting the quantitative and qualitative development of insurance (24-26), and strengthening the regulatory role of public and private insurance were among the achievements.

Challenges: increasing the financial burden, of budget deficit and the overlap of insurance companies(20).

#### ***B-1-2) Sustainability of financial resources***

Achievements: Achievements regarding the sustainability of financial resources include the role of charities in financing, increase in health taxes, and upstream organizations support(21).

Challenges: on the other hand, lack of timely allocation of budget and instability of financial resources allocation based on bargaining, and increasing insurance obligations are among the challenges (15, 19, 27).

### ***B-2) Pooling***

#### ***B-2-1) Integration of insurance funds***

Achievements: Legal support for integration insurance funds has been one of the achievements mentioned.

Challenges: The weakness of the regulations regarding the consolidation of funds has been pointed out as a challenge.

#### ***B-2-2) pooling process***

Achievements: Increasing organizational capacity and using scientific evidence in resource management are among the achievements in the pooling process.

Challenges: non-transparent financial flow (28), managerial instability, and lack of a responsible institution for integrated stewardship were mentioned as challenges.

### ***B-3) Purchasing***

#### ***B-3-1) Benefit package***

Achievements: Increasing the number of people under coverage and insurance services (24), reducing out-of-pocket payments (19, 25, 26) and catastrophic health expenditure, paying attention to the low-income population (25) and incurable patients, and providing comprehensive health services (29) are among the achievements.

Challenges: Also, the perspective of treatment orientation in the MOHME policy makers (6, 29) and incompatibility benefit packages for the patients' needs (30) are some of the challenges.

#### ***B-3-2) purchasing process***

Achievements: Using health technology assessment to resources allocation and strengthening the role of the MOHME as a service purchaser are of the achievements.

Challenges: Issues such as increase in debts, unrealistic tariffs, lack of strategic purchasing, increase in the cost of purchasing capital, and con-

sumables medical equipment have made the process of purchasing difficult (7, 22).

### ***C) Resources generation***

#### ***C-1) Human Resources***

##### ***C-1-1) Availability***

Achievements: Addressing the shortage of human resources in the public sector, presence of resident specialists, and good interaction between healthcare providers are among the achievements (17, 26).

Challenges: Manpower burnout, poor management, imbalance in the distribution of workforces, and insufficient skills were the negative aspects (10, 12, 18).

##### ***C--1-2) Motivational factors***

Achievements: Motivating, planning the annual recruitment of human resources, developing employment opportunities, and maintaining the satisfaction of healthcare providers are some of the achievements (17, 30).

Challenges: Also, discrimination in the payments between different disciplines, job dissatisfaction in nurses, diminishing ethical values, and increasing expectations of nurses are the main challenges (27, 31).

##### ***C-1-3) Capacity building***

Achievements: Improving staff training, benefits from scientific, research, and educational capabilities in addition to the empowerment of health managers were mentioned as the achievements (9, 18, 24).

Challenges: weakness in training for healthcare providers, selection and development of managers, and lack of personnel preparation are some of the challenges (12).

#### ***C-2) Physical resources***

##### ***C-2-1) Medical equipment and information technology***

Achievements: Optimizing the management of medical equipment, increasing the number of hospital beds, and strengthening the management information systems are some positive aspects (13, 19).



Challenges: Issues such as lack of proper supply chain of medicine and equipment, insufficient infrastructure, low quality of equipment, and the weakness in health technology management are some of the challenges (7, 12, 15).

### ***C-2-2) Facilities and buildings and Service Provision***

Achievements: Implementation of the quality program of hotel service and construction of new medical centers are among the positive points (32).

Challenges: Impossibility of physical development of hospitals, lack of physical space and facilities for patients are among the challenges (27).

### ***D) Service provision***

#### ***D-1) Capacity of health services***

Achievements: Increasing the occupancy rate of hospital beds, increasing the number of healthcare providers and specialized and sub-specialized medical services, expanding the medical emergency air services, developing the health network, and having variety in prevention are among the positive points (23, 26, 30).

Challenges: Challenges such as increasing the workload of medical centers, unresponsive service delivery with increasing unnecessary referrals, gaps in the referral system, and insufficient presence of physicians in public hospitals are some of challenges (11, 27, 32, 33).

#### ***D -2) Quality of health services***

Achievements: Improving responsiveness, reducing patient complaints, having follow-up and patient education, improving health literacy, and improving health service indicators are some of the achievements (18).

Challenges: Reducing the quality of services, increasing the workload, people's dissatisfaction with some aspects of the plan, and increasing the waiting time are some of the challenges (10, 15, 28).

#### ***D-3) Access***

Achievements: Public access to services, providing services to the poor people and residents of

deprived areas, and offering financial protection to patients with incurable diseases are among the positive points (22).

Challenges: Issues such as lack of social services and universal health coverage were also frequent challenges (31).

## **Discussion**

Although the HTP in some programs has had positive results, in some programs, it has not been successful. In another study conducted as a scoping review of quantitative studies, this plan, despite achieving a number of set goals, failed to reach some others (34). In terms of planning, the existence of standard protocols and planning for their implementation are among the achievements. Disagreement over policy guidelines and policymakers' lack of attention to periodic monitoring of policies and planning have been identified as challenges to the health system reform in Iran (35). In another study considered unstable, inconsistent, and non-transparent instructions as one of the challenges of the HTP (31). Given the recurrence of the challenge of poor monitoring accuracy in many studies, involving independent organizations for outcome-based monitoring and evaluation can be more effective (11, 12). Moreover, lack of proper planning and piloting of the plan were some frequent challenges associated with planning. Unsustainable planning, cross-sectional, and unplanned decisions were considered as results of political haste and lack of integration of reforms over different periods of time(17). In a study, the weakness of internal and external supervision was mentioned as one of the challenges for implementing the specialist residency program (36).

Reducing out-of-pocket payments and catastrophic health expenditure as the ways to achieve universal health coverage have been achieved after the implementation of the HTP and have been confirmed in many studies(37). Moreover, in the report of the MOHME in 2016, the amount of out-of-pocket payments after the HTP has decreased by 32.8% compared to be-

fore-2011 HTP in the inpatient care (21). On the other hand, this plan has not been successful in reducing payment rates (38). Reducing payments can increase access to hospital services, especially the low-income groups (39); one of the policies of the health sector is to reduce direct payments. The instability of financial resources has been repeated as one of the challenges in many studies. Ghanbari et al. pointed out the weakness in the continuation of financial support for this plan (37). Lack of timely and unfair allocation of plan budget is one of the challenges of sustainable financing. The inadequacy of the budget with the goals of the HTP was considered as one of the administrative challenges (17). The delay in paying subsidies was noted to the hospital (20). Increasing the financial burden of insurance companies and the budget deficit are among the frequent cases of challenges. Insurance companies have faced higher costs since the launch of the plan as their liabilities for expensive drugs and equipment have increased, and tariff increases have created new challenges for insurers (20).

Discrimination and delays in payments, reduced motivation, and job dissatisfaction were among the items frequently mentioned in studies. Alidadi and Ghanbari also pointed to discrimination in payments between physicians and nurses (17, 37). The reason for the delay in payments was due to the fact that the financing of the plan did not have a fixed routine, and the decrease in the budget has led to delay in payment (12). Ferdosi et al. have also pointed to delay in personnel payments (20). About one-third of nurses were dissatisfied for reasons such as increased referrals and irregular payments (40). The dissatisfaction of healthcare providers was mentioned (31); satisfaction of staff is important because human resources is one of the six building blocks of the health system (41). Inadequate infrastructure has been reported to be one of the most frequent items in the study (15, 17). Weak infrastructure has been one of the important challenges of the HTP (32).

Increasing patients' access to health services in deprived areas has been one of the frequent

points. The retention of physicians program has led to an increase in patients' access to specialized health services. A significant increase in the number of surgeries and outpatient visits indicates an increase in public access (26). Increasing workload and unnecessary visits are the main challenges. The transfer of patients from the private sector to the public sector without changing the hospital setting and the health workforces has put a lot of pressure on the health team (42), led to the dissatisfaction of hospital staff (43). In this study, the gap in the referral system and family physician program has been mentioned as one of the challenges. Achieving the goals of the HTP, especially at the level of primary health care, requires a family physician program and upgrading the referral system (11). Reducing the number of patients' complaints and increasing satisfaction related to the procurement of drugs and consumable medical equipment are among the achievements (37). The results of this study showed that the existence of informal payments in the health sector has caused patient dissatisfaction. Supervision on the phenomenon of informal payments was relatively successful at the beginning of the plan but has continued to be problematic (44).

This study had several limitations. First, some reports and research, especially at the beginning of the plan, may not have been published at all, so their results were not included. Secondly, some of the published articles were part of a more extensive study, and other research results may not have been published or included in this study.

## **Conclusion**

After six years from the beginning of the HTP, there are both achievements and challenges in the implementation of the plan. Regarding the recurring challenges of the health system governance, strengthening the mechanisms of careful planning, monitoring, participation of all stakeholders in the planning process, and the use of clinical guidelines can greatly reduce the challenges of this sector. Moreover, as to the financing of chal-

lenges, predicting sustainable financial and budgetary resources, integrating insurance funds, conducting cost-effectiveness studies, and implementing strategic purchasing in the health system can be helpful. Eliminating discrimination in payment, strengthening employee skills, improving human resource productivity, and information infrastructure can help address the challenges of resource production functionality. Moreover, the establishment of a referral system and family physician, quality monitoring, and the use of quality improvement strategies can be effective in addressing the challenges of providing services.

## Journalism Ethics considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

## Acknowledgements

This study was part of a Research project supported by Tabriz University of Medical Sciences, Tabriz, Iran. (Grant number: 68034).

## Conflict of interest

The authors declare that there is no conflict of interests.

## References

1. Heshmati B, Joulaei H(2016). Iran's health-care system in transition. *The Lancet*, 387(10013):29-30.
2. Lankarani KB, Ghahramani S, Zakeri M, Joulaei H(2015). Lessons learned from national health accounts in Iran: highlighted evidence for policymakers. *Shiraz E-Med J*,16(4):1-3.
3. Meymand FM, Aryankhesal A, Raeissi P(2016). Relationship between Quality of the referral Chain of hospital services and patient satisfaction. *Global J Health Sci*,9(2):68-75.
4. Emami Razavi SH(2016). Health system reform plan in Iran: Approaching Universal Health Coverage. *Hakim Health Sys Res J*,18(4):329-35.
5. Moradi-Lakeh M, Vosoogh-Moghaddam A (2015). Health sector evolution plan in Iran; equity and sustainability concerns. *Int J Health Policy Manag*,4(10):637-40.
6. Sajadi HS, Dehghani A, Khodayari R, Zandiyan H, Hosseini SS(2018). The Policy Analysis of Iran's Health Transformation Plan in Therapeutic Services. *Hakim Health Sys Res*,21(2):71-88.
7. Sharbafchizadeh N, Karimi S, Ansari M (2019). Identification of Effective Factors on the Implementation of Health Reform Plan Package for the Improvement of Hoteling Quality: a qualitative study. *Journal of Health Based Research*,5(2):131-49.
8. Ebrahimi A, Baki Hashemi MM (2019). Applying Interpretive-Structural Modelling to Review Priorities of Health Reform Plan: Evidence-based policy making. *Journal of Health Administration JHLA*,22(3):9-27.
9. Raeisi AR, Shaarbafchizadeh N, Aghdak P, Fouladi Z (2019). Outcomes of Health Care Reform Implementation in Slum Areas of Isfahan: a qualitative study. *Journal of Health Based Research*, 5(1):81-100.
10. Raisi M, Eskandari N, Abbasi M, Rahbar A(2019). Customers' satisfaction with the Iranian health system reform plan. *J Educ Health Promot*,8(1):170-178.
11. Doshmangir L, Moshiri E, Mostafavi H, Sakha MA, Assan A(2019). Policy analysis of the Iranian Health Transformation Plan in primary healthcare. *BMC Health Serv Res*, 19(1): 670.
12. Ravanipour M, Ostovar A, Darabi H, Pouladi S (2020). Challenges of Health System Reform Plan in Bushehr: A Qualitative Study. *ISMJ*,22(6):415-31.
13. Shojaie B, Ferdosi M, Keyvanara M, Yarmohamadian MH (2018). The Overt and Covert Effects of Iranian Health Transformation Plan on Medicine and Medical Supplies. *Health Scope*,7(S):1-6.
14. Hong QN, Pluye P, Fàbregues S, et al (2018). Mixed methods appraisal tool (MMAT), version 2018. Registration of copyright ,1148552.

15. Eskandari N, Raissi M, Abbasi M. Explanation of the Management Challenges of Health System Reform in Health Care Domain city QOM: A Qualitative Study (Iran). *Qom Unive Med Sci J*. 2019;13:78-89.
16. Aryankhesal A, Meydari A, Naghdi S, Ghiasvand H, Baghri Y(2018). Pitfalls of revising physicians' relative value units (RVUs) in Iran: a qualitative study on medical practitioners' perspective. *Health Scope*,7(S):e63140.
17. Alidadi A, Ameryoun A, Sepandi M, et al(2016). The opportunities and challenges of the ministry of health and medical education in the implementation of healthcare reform. *Health Research*,1(3):173-84.
18. Abedi G, Soltani Kontai SA, Marvi A, Mazidi S, Abedini E, Abbasi Chaleshtary A (2018). SWOT analysis of health reform plan on healthcare sector from the stakeholder perspective. *Journal of Mazandaran Unive Med Sci*,28(166):199-212.
19. Mohamadi E, Olyacemanesh A, Majdzadeh R, et al (2019). Effect of the health transformation plan (HTP) on implementation processes, rules and regulations of basic health insurance organizations in Iran. *Hakim Res J*,21(4):255-65.
20. Ferdosi M, Kabiri S, Keyvanara M, Yarmohammadian MH (2017). Challenges of iran health transformation plan about inpatients payment: Viewpoint of experts. *Health Scope*,6(3):1-6.
21. Peikanpour M, Esmaeli S, Yousefi N, Aryaeinezhad A, Rasekh H (2018). A review of achievements and challenges of Iran's health transformation plan. *Payesh (Health Monitor)*, 17(5):481-94.
22. Rahmany K, Barati M, Ferdosi M, Rakhshan A, Nemati A (2018). Strategies for reducing expenditures in Iran's health transformation plan: A qualitative study. *Med J Islam Repub Iran*,32(1):591-7.
23. Yousefi MR, Taziki MH (2018). The Approach of Full-time Faculty Members in Clinical Practice: A Qualitative Study. *Bimonthly of Education Strategies in Medical Sciences*,11(2):115-22.
24. Jafari M, Nemati A, Mahmoudi MS, et al(2018). Implementation effect of specialist residency program: A case study on performance indicators of emergency departments. *Int J Healthc Manag*,13(1):1-10.
25. Etemadi M, Ashtarian K, Ganji N, Kangarani HM, Gorji HA (2019). Have the poor been considered in the Health Sector Evolution Plan? A qualitative study of the Iranian health system. *Int J Hum Rights Healthc*,13(1):45-57.
26. Olyacemanesh A, Manavi S, Aghajani M (2017). Implementing the Health Transformation Plan with Emphasis on Supporting the Survival of Physicians in Deprived Areas: The Results and Challenges. *Hakim Health Sys Res*,19(4):228-37.
27. Khalajinia Z, Gaeeni M(2018). Challenges in Implementation of Health Care Reform in the Area of Treatment Qom City. *Management Strategies in Health System*,3(3):212-24.
28. Jahangir M, Khorakian A, Mortazavi SS, Elahi SE (2019). Risk management model of Iran's health system transformation plan: A qualitative study. *Payesh (Health Monitor)*,18(4):333-45.
29. Abbasi M, Eskandari N, Raisi M (2018). Iranian Health Reform Advantages in Health Care System: A Qualitative Study. *Ann Mil Health Sci Res*,16(1):4-12.
30. Gholami S, Oveisi S, Ghamari F, Etedal MG, Rajaei R (2015). Study of Educational Hospital Employees' Satisfaction with the Administration of the Health Reform Plan in Ghazvin, 2015. *Electron Physician*,7(7):1500-4.
31. Alipour Z, Eskandari N, Abbasi M, Raisi M, Bakouei S(2019). Structural challenges in the health domain of the health system reform: A qualitative study. *J Edu Health Promot*, 8(1):55-64.
32. Gharibi F, Janati A, Beiknoori MF, Daghalian BA(2018). A survey of health system reform circumstances from the experiences of managers and nurses of Tabriz Taleqani hospital. *Depiction of Health*,6(1):1-10. <https://doh.tbzmed.ac.ir/Article/doh-110>
33. Shirozhan S, Hosseini M, Rajabi S, Sedighi Pashaki M (2018). Explaining the nurses' experiences of implementation of health system reform plan. *JHPM*,7(4):1-7.
34. Jafari M, Ghasemyani S, Khodayari-Zarnaq R, Raoofi S (2021). Health Transformation Plan Achievements and Outcomes in Iran (2014-2020): A Scoping Review. *Med J Islam Repub Iran*,35(1):1126-35.

35. Moghaddam AV, Damari B, Alikhani S, et al (2013). Health in the 5th 5-years Development Plan of Iran: main challenges, general policies and strategies. *Iran J Public Health*,42(1):42-9.
36. Moradi R, Karimi S, Yarmohammadian MH, Kiaei MZ, Mazaheri E (2018). Opportunities and challenges of resident specialists' attendance plan guidelines (health-care transformation plan) in Isfahan university hospitals in 2015. *J Educ Health Promot*, 7:39-46.
37. Ghanbari A, Moaddab F, Heydarzade A, Jafaraghaee F, Barari F (2017). Health system evolution plan; A new approach to health care delivery: The challenge ahead. *Hakim Res J*, 20(1):1-8.
38. Kiaei MZ, Moradi R, Hasanpoor E, Mohammadi M, Taheri A, Ahmadzadeh MS (2015). Hospital managers' perception of recent health care reform in teaching hospitals of Qazvin, Iran. *Biotechnology and Health Sciences*,2(4):1-6.
39. Ebrahimpour A, Alimohammadzadeh Kh, Maher A (2019). Evaluating the Health Reform Plan in Ayatollah Taleghani Hospital, Tehran in 2010-2017 Using the Balanced Scorecard. *Hakim Res J*,22(2):100-11.
40. Bahmanziari N, Bastani P, Moradi R, Ahmadzadeh MS, Nazari M (2017). Nurses' Satisfaction of Implementation of Health System Evolution Plan in Teaching Hospitals of Shiraz City, 2015 (IRAN). *Qom Unive Med Sci J*,11(8):85-93.
41. World Health Organization(2006). The world health report 2006: working together for health: policy briefs. World Health Organization. <https://apps.who.int/iris/handle/10665/43471>
42. Hashemi B, Baratloo A, Forouzafar MM, Motamedi M, Tarkhorani M (2015). Patient satisfaction before and after executing health sector evolution plan. *Iranian Journal of Emergency Medicine*, 2(3):127-33.
43. Bastani P, Mousa Kazemi Z, Ahmadzadeh MS (2017). A comprehensive evaluation of the satisfaction rate related to implementation of health transformation plan in southern Iran in 2015. *Danesbvar*,24(129):75-86.
44. Dehghan A, Mirjalili MR, Zare Mehrjardi MH, Maliheh R, Samiyezargar A, Kazemeini SK (2016). Performance of health care system reform plan from the perspective of university hospitals executives in Yazd province in 2015. *Management Strategies in Health System*,1(1):43-9.